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ABSTRACT

Many adolescent clients of the Division of Alcohol and Substance Abuse (DASA) in Washington come also with psychiatric problems, are involved with the legal system, live with someone who abuses drugs or alcohol, have poor social support networks, or live in poverty. This report describes a sample of adolescent clients who received treatment and/or assessment services funded by DASA in early 1990. Following the report's Introduction, which outlines the background, methods, report organization and limitations, the study profiles client placement into inpatient, intensive outpatient, and regular outpatient treatment modalities. Adolescents were then followed through the three stages of the treatment process: (1) assessment; (2) entry into treatment; and (3) completion of the planned treatment. Researchers compared clients assessed with a non-serious drug or alcohol problem with those considered as abusing or addicted to one or both substances. Investigators identified characteristics of clients involved with the court system and examined the differences in the characteristics and placement of clients from Eastern and Western Washington. The final chapter presents clients' results on the Personal Experience Inventory. Six appendices present statistical results and demographic information. The myriad problems of these adolescents make them a difficult group to treat--they may require an array of services of which drug and alcohol treatment is an important, but solitary, component. (RJM)

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REPORT

ADOLESCENT CLIENTS OF WASHINGTON STATE'S DIVISION OF ALCOHOL AND SUBSTANCE ABUSE SERVICES

A Descriptive Study

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ADOLESCENT CLIENTS OF WASHINGTON STATE'S DIVISION OF ALCOHOL AND SUBSTANCE ABUSE SERVICES

A DESCRIPTIVE STUDY

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Alcohol and Drug Dependency Services (ADDS)	Ellensberg
Alpha House/Force	Tacoma
Auburn Youth Resources	Auburn
Carondelet Psychiatric Care Center	Richland
Center for Alcohol and Drug Outpatient Services	Wenatchee
Center for Human Services (CHS)	Seattle
Central Youth and Family Services (CYFS)	Seattle
Community Alcohol and Drug Center (CADC)	Bellingham
Community Alcohol and Drug Services	Everett
Community Alcohol and Drug Services (CAS)	Lynnwood
Counseling Services Alcohol/Drug Program	Omak
Daybreak Inpatient of Spokane	Spokane
Daybreak Outpatient of Spokane	Spokane
Deaconess Hospital Chemical Dependency Unit	Spokane
Discovery Substance Abuse Services	Kennewick
Federal Way Youth Services	Federal Way
Ferry County Community Services	Republic
Green Valley Lodge	Sunnyside
Highline Youth and Family Services	Seattle
Jefferson County Community Alcohol/Drug Abuse Center	Port Townsend
Kent Valley Youth Service Bureau	Kent
Kitsap County (KCCA)	Bremerton
Kitsap Mental Health Services	Bremerton
NW Counseling (Omni Clinic)	Yakima
NW Treatment Center	Seattle
Olympic Center	Bellingham
Parke Creek	Ellensberg
Pierce County Alliance	Tacoma
Recovery NW	Chehalis
Recovery NW Outpatient Center	Vancouver
Ryther Child Center	Seattle
Ryther Child Center, "Discovery House"	Seattle
Skagit County Council on Alcoholism	Mt. Vernon
Sundown M Ranch	Selah
St. Peters Chemical Dependency Center	Lacey
Thunderbird Treatment Center	Seattle
Thurston/Mason Community Mental Health (T/M CMHC)	Olympia
United General Hospital	Sedro Woolley
Walla Walla Community Alcohol & Drug Abuse Center	Walla Walla
West End Outreach Services	Forks
Whitman County Alcohol Center	Pullman
Youth Eastside Services (YES)	Bellevue
405 Program	Tacoma

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EXECUTIVE SUMMARY

BACKGROUND

This report describes a sample of adolescent clients who received treatment and/or assessment services funded by the Division of Alcohol and Substance Abuse (DASA) in early 1990. The report analyzes client characteristics by treatment modality, stage of treatment, severity of alcohol/drug use, degree of involvement with the courts, and geographic residence. In addition, results from a widely used drug and alcohol assessment tool, the Personal Experience Inventory (PEI), are discussed.

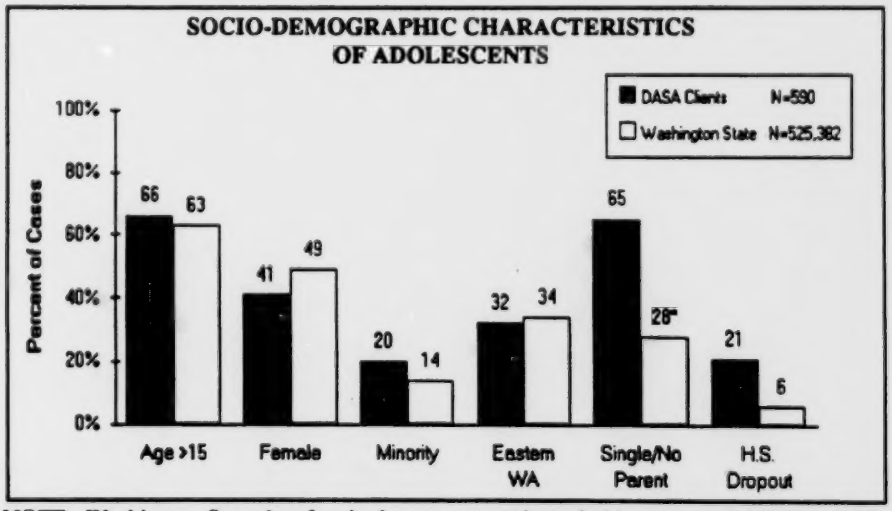
Data were collected from agency case records and interviews with drug and alcohol counselors. The sample consisted of 590 clients, from 43 agencies, assessed for treatment between January and May 1990.

MAJOR FINDINGS

Socio-Demographic Characteristics

The majority of DASA adolescent clients assessed for treatment were over 15 years of age. They were predominantly white males residing in Western Washington, coming from single or no parent households. A large proportion of clients were also high school dropouts.

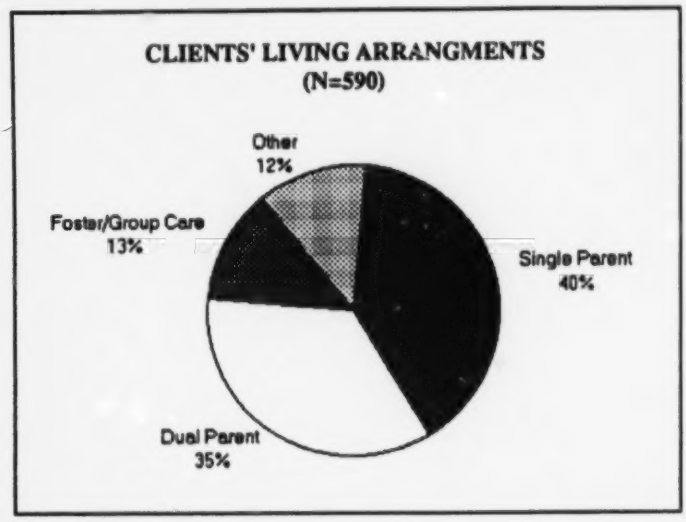
DASA clients were similar to other adolescents in the state in terms of their age and geographic residence. They differed, however, by having a larger proportion of males, minorities, clients from single or no parent households, and high-school dropouts.



NOTE: Washington State data for single or no parent households were not available. 1988 US data on children aged 0-18 were used for comparison. (The State of Washington's Children, Institute for Public Policy Management [IPPM] 1991, pp.10+28).

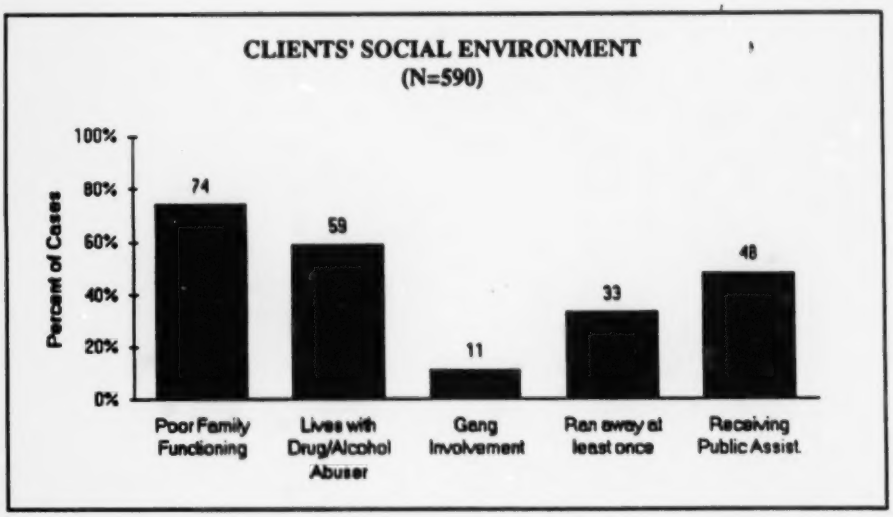
Living Arrangements

The previous graph indicated that 65% of DASA clients were from a single or no (natural) parent household. The shaded sections in the graph below show that this 65% consists of clients from: single parent families (40%), foster homes or group care situations (13%), and other types of living arrangements including living alone, or with siblings, friends, or room-mates (12%).



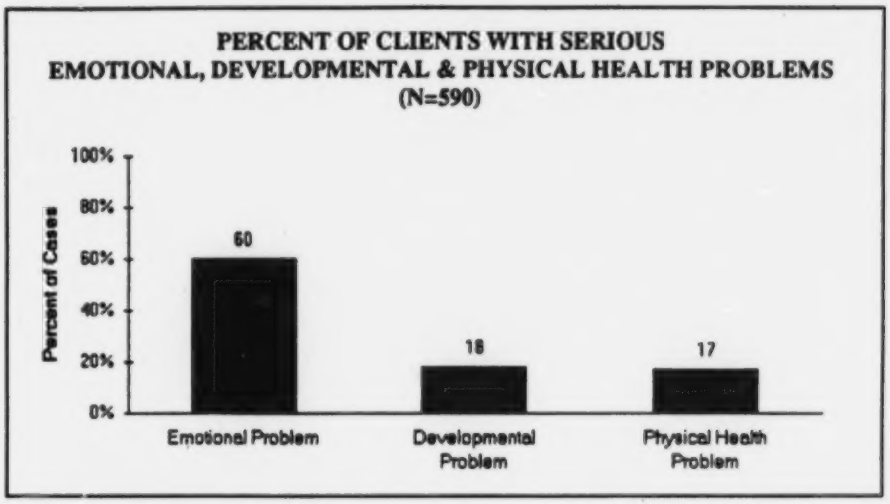
Social Environment

The majority of clients reported poor family functioning (74%) and living with someone who abuses drugs or alcohol (59%). Almost half (48%) of the clients reported that they or their families received some type of public assistance such as welfare, medical assistance or family services. Clients also reported running away from home (33%), and gang involvement (11%).



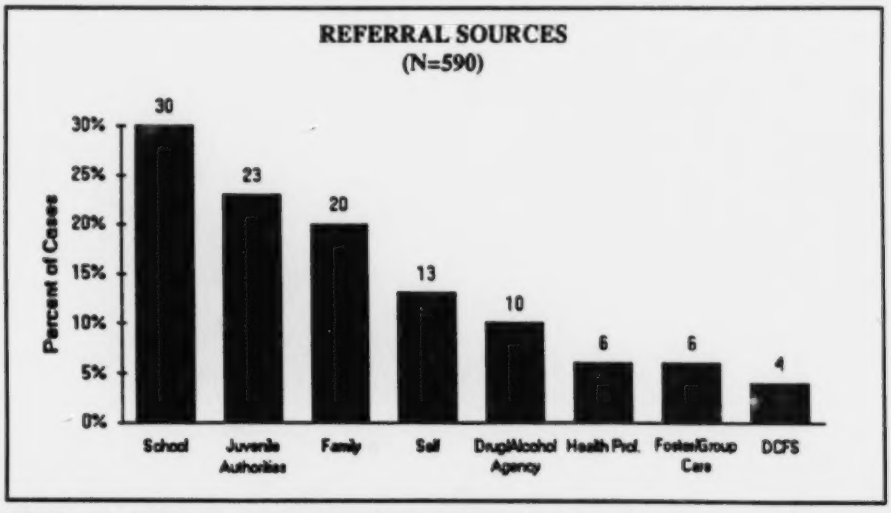
Health Problems

The majority of clients (60%) were assessed as having a serious psychiatric or emotional problem. Less than one fifth of the clients were identified as having a developmental or intellectual impairment (18%) or a physical health problem (17%).



Referral Sources

The most commonly reported referral sources were schools (30%), juvenile authorities (23%) and families (20%). Other sources included self referrals (13%), drug/alcohol agencies (6%), health professionals (6%), foster homes or group care institutions (6%), and the Division of Children and Family Services (DCFS) (4%).



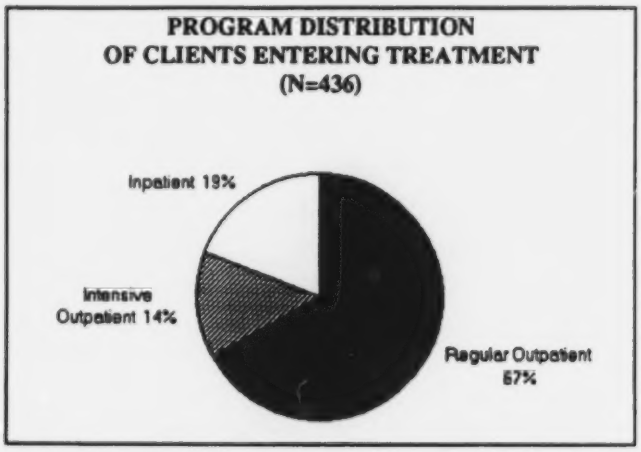
NOTE: An adolescent may be referred into treatment by more than one source. Consequently the percents add up to more than 100.

Placement into Treatment Programs

Clients were assigned to one of three treatment modalities:

- **Inpatient** - treatment programs in residential settings that support abstinence from alcohol and other drugs.
- **Intensive Outpatient** - non-residential treatment programs offering at least 6 hours of treatment a week for a total of 72 hours.
- **Regular Outpatient** - all other non-residential treatment programs.

Regular outpatient was the most commonly recommended treatment modality. 67% of the clients were assigned to this modality compared to only 19% to inpatient and 14% to intensive outpatient modalities.



Predicting Inpatient Placement

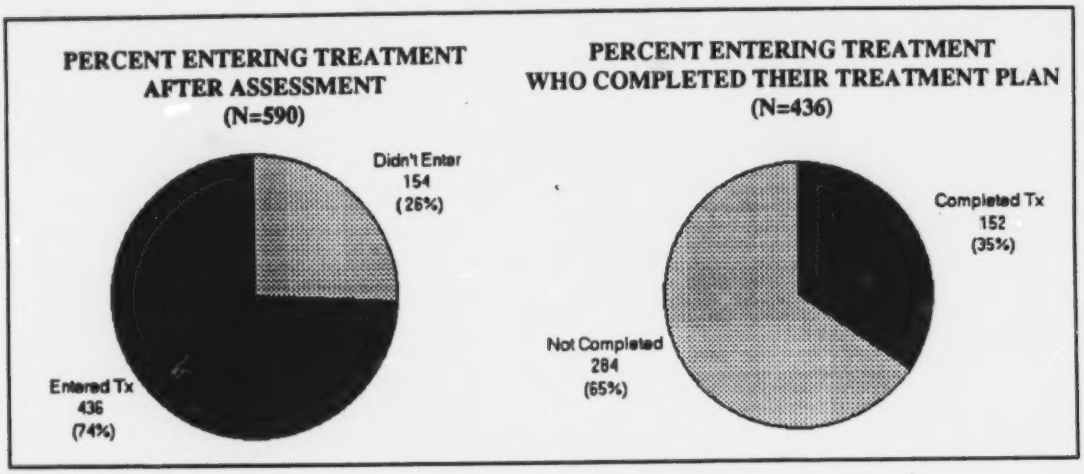
Results from a multiple regression analysis identified the following client characteristics as being positively related to inpatient placement over outpatient placement: assessed as addicted, referral into treatment by a drug/alcohol treatment center, absence of serious emotional problems, minority status, court involvement, and receiving public assistance.

Predicting Regular Outpatient Placement

Results from a multiple regression identified the following variables as positively related to regular outpatient placement: being assessed as not addicted, not being on public assistance, being White, living in Eastern Washington, and never having run away.

Client Retention

Of the clients assessed, 74% actually entered DASA-funded treatment. 35% of those who entered, completed their treatment plan. Completion of the treatment plan is a very conservative and rough measure of treatment success. Likewise, non-completion does not necessarily indicate treatment failure. Non-completers include clients transferring to other treatment facilities, as well as clients who were unable to continue due to unrelated reasons such as hospitalization or a change in residence.


PERCENT ENTERING TREATMENT AFTER ASSESSMENT (N=590)
Didn't Enter 154 (26%)
Entered Tx 436 (74%)
PERCENT ENTERING TREATMENT WHO COMPLETED THEIR TREATMENT PLAN (N=436)
Completed Tx 152 (35%)
Not Completed 284 (65%)

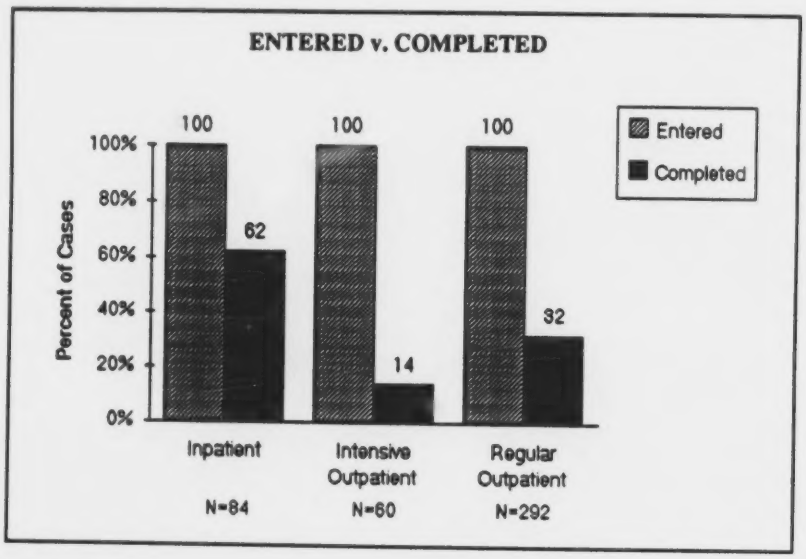
Client Retention Between Assessment and Entrance into Treatment Program

About a quarter (26%) of assessed clients did not enter treatment: 5% were assessed as not having a serious problem with drugs or alcohol, 9% were assessed as abusing, and 12% as addicted.

Results from a multiple regression indicate that clients assessed as addicted who did not enter treatment were more likely to: not have been referred for assessment by a drug/alcohol treatment agency, be White, be male, and not to have been receiving public assistance.

Client Retention Between Entrance and Completion of Treatment Program

The second pie chart on the previous page indicated that 35% of those who entered treatment completed their treatment plan. This percent was not consistent across the three modalities. Clients assigned to inpatient treatment were the most likely to complete treatment (62%) followed by those assigned to regular outpatient (32%) and those assigned to intensive outpatient (14%).



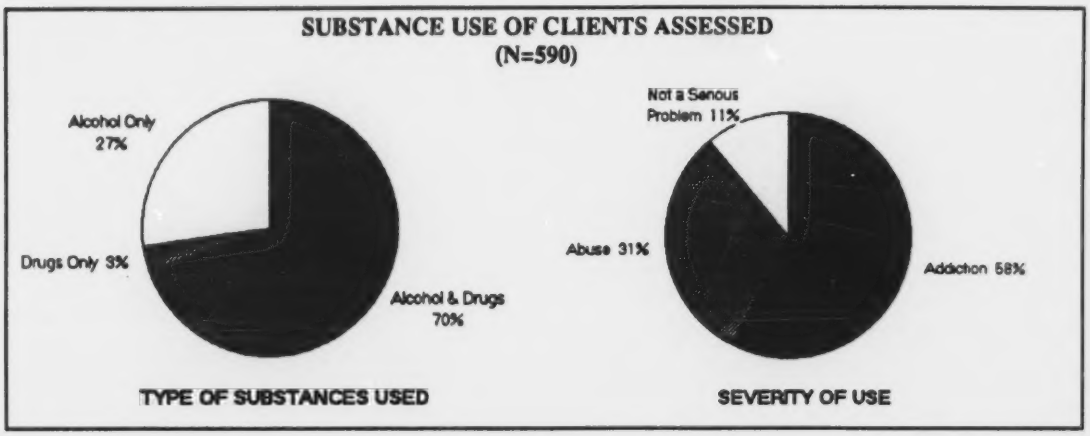
Adolescents who did not complete treatment were more likely to report having a physical, emotional or developmental problem and less likely to report family participation in their treatment than completers. Adolescents who did complete treatment were more likely to have been referred into treatment by their schools or by juvenile authorities.

A multiple regression was run to identify predictors of non-completion for each modality. No significant predictors were identified among inpatient or intensive outpatient clients. Results from the analysis among regular outpatient clients identified those who: were self-referred into treatment, had no family member participate in their treatment, had serious emotional problems, were assessed as addicted, reported poor family functioning, and were not referred into treatment by their schools, as more likely not to complete treatment.

Predictors of completion among regular outpatient clients are the reverse of the variables listed above. Clients who were not self-referred, who did have a family member participate in their treatment, who did not have serious emotional problems, who were assessed as not addicted, who did not report poor family functioning, and who were referred into treatment by their schools, were found to be more likely to complete regular outpatient treatment.

Substance Use

The majority of clients assessed reported using both drugs and alcohol (70%) and were assessed as addicted to at least one substance (58%).



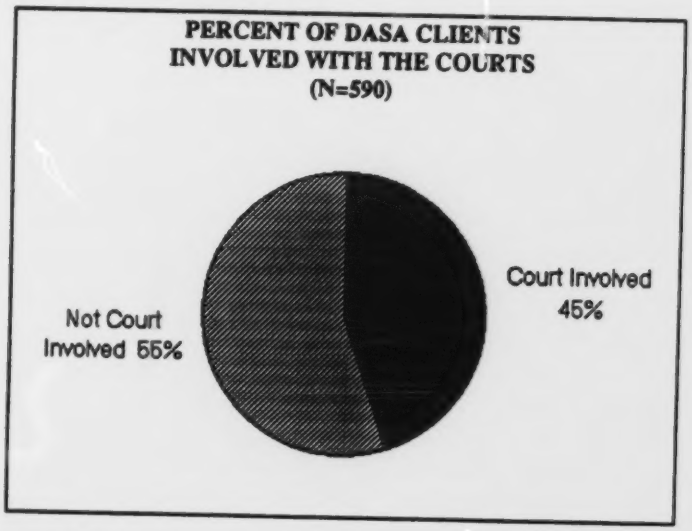
Age and ethnicity were found to be significantly related to severity of use while gender was not. Older adolescent clients (aged 16-18) had more severe drug and alcohol problems than younger adolescent clients (aged 13-15). White and Native American clients had more serious drug and alcohol problems than clients from the other ethnic groups studied.

Addicted clients were more likely to report being a high school dropout, coming from a single or no parent family, running away, having emotional problems, and poor family functioning than other clients.

Results from a multiple regression suggested that the following client characteristics are predictors of addiction: using drugs (with or without alcohol), having serious emotional problems, and being a high school dropout.

Court Involvement

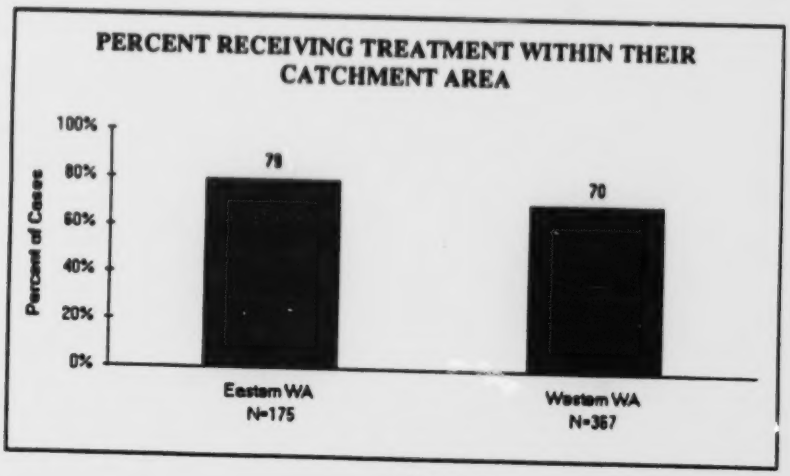
Almost half (45%) of all DASA adolescent clients assessed for treatment were identified as having been involved with the court system.



Court involved clients had a larger proportion of males, high school dropouts, receivers of public assistance, and treatment plan completers than clients not involved with the courts.

Geographic Residence

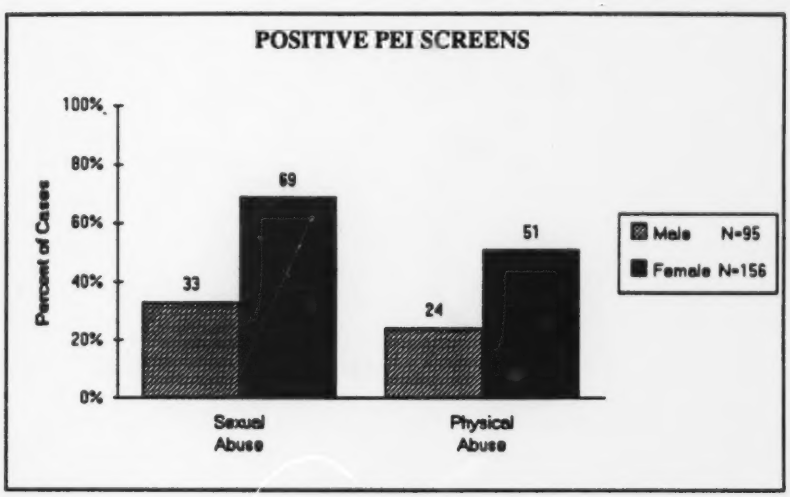
A significant difference in access to treatment within a client's "catchment area" was detected between clients from Eastern and Western Washington. 79% of Eastern Washington clients received services within their catchment area compared to 70% of Western Washington clients. Catchment areas were defined by aggregating the clients' zip codes according to the first three digits (See Appendix E for a map of these areas). This difference between clients from Eastern and Western Washington may be due to the smaller zip code areas and the larger number of clients residing near catchment area boundaries in Western Washington.



Personal Experience Inventory (PEI) Results

Valid results from the PEI were available for about 26% of the sample. DASA clients with a PEI available for analysis scored similarly to national norms of adolescent drug clinic clients on the five summary scales: Personal Involvement with Chemicals, Effects from Drug Use, Social Benefits of Use, Personal Consequences of Use, and Polydrug Use.

Results from the PEI's six problem screens: Psychiatric Referral, Eating Disorder, Sexual Abuse Victim, Physical Abuse Victim, Family History of Chemical Dependency, and Suicide Potential, are also reported. National norms among adolescent drug clinic clients were not available for these screens. As shown below, the majority of female clients had positive sexual (69%) and physical abuse (51%) screens. Female clients had a significantly higher incidence of positive abuse screens than male clients.



The PEI also records specific substances used. Of the clients with a PEI available, 81% reported using alcohol within the last 3 months, 65% using marijuana, 19% using cocaine, 19% using amphetamines, and 19% using LSD.

In summary, many DASA adolescent clients have psychiatric problems in addition to substance abuse problems, are involved with the legal system, live with someone who abuses drugs or alcohol, have poor social support networks, and live in poverty. The presence of these multiple problems makes them a particularly difficult group to treat.

CHAPTER 1: INTRODUCTION

BACKGROUND

In 1984, Washington State's Division of Alcohol and Substance Abuse Services (DASA) began a new adolescent substance abuse treatment program. Initial efforts focused on developing inpatient treatment capacity. Two special inpatient treatment programs were established; one in Seattle and the other in Spokane. In 1986 the program added a third inpatient program serving primarily Native American clients. In addition, the availability of regular outpatient services to indigent or low income adolescents was improved by expanding agencies that served both adolescents and adults, and by establishing new agencies that served adolescents only. In 1989, the Omnibus Drug Act enabled DASA to expand access to inpatient and intensive outpatient treatment services. By contracting directly with private agencies for inpatient services and implementing intensive outpatient treatment services on a larger scale, the state was able to significantly improve adolescents' access to treatment.

This report is the first examination of DASA's expanded adolescent treatment program. Characteristics of the clients, the services they received, and their placement into alcohol and drug treatment programs were studied. Three other reports will be produced. One report will describe the treatment programs available to adolescents in Washington state. Another report will examine relationships between schools, assessment personnel and treatment agencies as found in four high schools. A final report will present results from a treatment professional peer panel review of adolescent placement into treatment programs.

METHODS

Sample Selection

The clients selected for the study were adolescents assessed for DASA-funded chemical dependency treatment between January and May 1990. Eligible clients received DASA-funded treatment services subsequent to their assessment.

About two thirds of the agencies in the state that serve DASA adolescent clients participated in the study. These agencies were selected based on a stratified random cluster sampling technique.

Agencies were stratified by treatment modality: Inpatient, Intensive Outpatient, and Regular Outpatient. All inpatient agencies were included in the sample. Agencies that provided outpatient treatment were divided into size clusters -- large, medium and small. A random sample of outpatient agencies in each stratum and cluster was drawn.

Consideration was also given to geographic location of agencies. About 60% of the adolescent agencies in each of Western and Eastern Washington were included in the sample.

The estimated population of DASA clients assessed during this period at all 73 agencies in the state, was 1,594 (see Table 1 below). The sample consists of 590 clients from 46 agencies, or 37% of all clients served during this period.

Clients were randomly selected from participating agencies, with over sampling of clients from smaller agencies. This method provided a more accurate representation of clients from agencies of different sizes.

TABLE 1. SAMPLE & POPULATION FIGURES

	No. Agencies	No. Clients
Estimated Population	73	1,594
Sample	46	590
Sampling Frame	63%	37%

Data Collection and Analysis

Data on these clients were obtained by:

1) reviewing agency case files, and
2) interviewing adolescent treatment counselors.

Client data were weighted to better represent the estimated population of DASA clients assessed during this time period. Adjustments were made for time, treatment modality and size of agency. Documentation of the weighting procedure can be found in Appendix F.

Data were collected on client demographics, utilization of DASA-funded treatment services, substance use, legal involvement, social environment and physical health, developmental and emotional problems.

Data were analyzed using simple descriptive statistics and chi square technique to determine significant differences. Regression analysis was also used to identify predictors of important variables.

ORGANIZATION OF THE REPORT

The chapters of this report, with the exception of the introduction and conclusion, have a similar format. Each chapter starts with an overview and a summary of major findings. Graphs follow, one per page, with main points presented below each graph. Throughout the report, the term "significant" is used only in the statistical sense which is defined at the $P_{0.05}$ level.

Explanatory tables and variable details are provided in the Appendix. These tables provide detailed data from each chapter and show significance levels for each variable used. The sub-sample sizes, indicated by the N's on the graphs and tables, represent the number of clients in particular groups. Percents were calculated from a sub-sample size that approximates N, but is typically smaller than N because cases with unknown values were omitted.

A brief description of chapters 2 through 7 is presented below.

Chapter 2. Program Placement: This chapter compares and describes clients assigned to inpatient, intensive outpatient and regular outpatient treatment modalities.

Chapter 3. Client Retention: Compares and describes clients at different stages of the treatment process: assessment, admission, and completion. It examines differences between clients who are assessed and enter treatment and those who are assessed but do not enter treatment. It also examines differences between clients who complete treatment and those who do not complete treatment.

Chapter 4. Client Substance Use: Compares and describes clients assessed at three different drug or alcohol severity levels -- addiction, abuse, and use not a serious problem.

Chapter 5. Court Involvement: Compares and describes clients who enter treatment because of a court involvement with those who do not enter treatment because of a court involvement.

Chapter 6. Geographic Residence: Compares and describes clients who reside in Eastern and Western Washington. It also examines differences among the Department of Social and Health Services (DSHS) regions in terms of the number of clients receiving DASA services and their severity of use.

Chapter 7. Personal Experience Inventory (PEI) Results: Presents aggregated PEI results from the 26% of the clients in the study with a valid, completed inventory. PEI scale and screen comparisons are made to national drug clinic norms. In addition, data on the specific substances used are presented. The basic characteristics of clients with PEI's compared to clients without PEI's are also related. Cases in this section were not weighted, and consequently results may not be generalizable to the population of DASA adolescent clients or to the sample.

LIMITATIONS

This study was limited by study design, time, the survey instrument, condition of agency files, drug/alcohol counselor memory, clinical judgement, and turnover in counselors at the agency.

The study was descriptive and not experimental in design. No specific hypotheses were being tested. The sample was selected based on treatment modality, size of agency, and date of assessment. Because of the evolving nature of DASA's treatment programs, the profile of the adolescent clients may have changed since the early 1990 assessment dates used in sample selection.

Another limitation was that the survey questions did not get at critical information such as specific drugs used, frequency and hours of treatment, and type of treatment received (group therapy, individual therapy, family systems therapy etc.). In addition, time constraints limited the comparison of DASA clients to the population of adolescents in the state.

At times, the poor condition of agency files had a limiting effect on the quality of data collected. Agencies tended to put their resources into programs rather than into maintaining records. Consequently the records were often incomplete and reviewing the files was difficult.

Turnover in drug and alcohol counselors, and counselor recall were also problematic. Part of the survey instrument was based on interviews with counselors. Unfortunately the counselors interviewed were not always the same ones who worked with the adolescent. Or, if they were the same, they may not have remembered the clients' situation well enough a year later to accurately answer the questions. In addition several of the questions were based on the clinical judgement of the drug and alcohol counselors and could not be objectively verified.

In spite of these limitations, the data collected are nonetheless useful, and provide reasonable bases for describing the characteristics of DASA's adolescent clients, programs and treatment conditions.

SUMMARY

The purpose of this report is to describe DASA adolescent clients, their placement into treatment programs, and their rates of completion.

The report is based on a sample of 590 clients assessed for treatment in early 1990. Clients were selected based on a stratified random cluster sampling technique. Data on clients were obtained by reviewing agency case files and interviewing treatment counselors.

Data were analyzed using simple descriptive statistics, chi square technique, and multiple regression analyses. Detailed explanatory tables are provided in Appendices A and B.

Clients are profiled by chapters, in terms of their: placement into programs, retention in programs, level of drug use, degree of court involvement, geographic residence and Personal Experience Inventory results. Limitations of the study were also discussed.

CHAPTER 2: PROGRAM PLACEMENT

This chapter presents findings on client placement into treatment programs. It looks at the distribution of clients among the different treatment modalities and compares their socio-demographic characteristics, ethnic composition, severity of drug use, prior treatment histories, social environment and referral sources.

The three treatment **modalities** used are:

- **Inpatient**
- **Intensive Outpatient**
- **Regular Outpatient**

Inpatient treatment refers to programs in residential settings that support abstinence from alcohol and other drugs. Intensive outpatient treatment refers to non-residential programs of at least 72 contact-hours' duration that offer clients at least six hours of treatment per week. Regular outpatient treatment refers to all other outpatient treatment programs.

The majority of DASA adolescent clients are between 13 and 17 years of age. Youth outside this range may enter adolescent treatment programs if deemed appropriate by the counselor at the time of assessment. Considerations for younger clients include: history of child abuse/neglect, ability to express and advocate for oneself, ability to think abstractly, ability to relate to adults and older adolescents, and physical size. Considerations for youth over 17 include their living situation, educational status, and income sources.

Adolescents may be referred for assessment by a variety of sources including schools, juvenile authorities, families, and health professionals. Typically they are referred to an outpatient facility for assessment. The counselor doing the assessment determines if treatment is necessary and what type of treatment would be most appropriate. The adolescent may then enter the treatment program where he or she was assessed, be referred to another treatment program, or be told that treatment is not necessary at this time.

MAJOR FINDINGS

Minorities

Minority groups were significantly represented among inpatient treatment clients. Minorities represent only 14% of the state population of adolescents (Institute for Public Policy Management, IPPM, 1991, p. 21) but 32% of inpatient treatment clients. This difference exists in spite of the finding in this sample that addiction rates are similar between minority and non-minority clients.

High School Dropouts

A relatively large proportion of clients (22%) were high school dropouts with the largest proportion found in inpatient treatment (36%). This contrasts with the state rate of 6% for all adolescents (Office of the Superintendent of Public Instruction, OSPI, 1991).

Living Arrangements

A significantly larger proportion of clients in inpatient and intensive outpatient treatment (74% and 75%) were from single or no parent households than clients from regular outpatient treatment (61%). Nationally, only 28% of youth come from these living situations (IPPM, 1991, p.10).

Substance Use

Over 90% of the clients in inpatient and intensive outpatient treatment were assessed as addicted. Based on a state study of substance abuse among public school students, the prevalence of high use[1] among 12th graders was 24% for alcohol (OSPI, 1991, p.2) and 7% for drugs (OSPI, 1991, pp. 18-19).

Geographic Residence

Clients from Eastern Washington make up 15% of intensive outpatient clients, 44% of inpatient clients and 38% of regular outpatient clients. As noted on p.11, the relatively low proportion in intensive outpatient may be due partly to under-sampling and partly to there being fewer IOP agencies in Eastern Washington. Across all three modalities, clients from Eastern Washington accounted for 36%. This is similar to the state distribution of adolescents in the two regions, with 34% residing in Eastern Washington (U.S. Census, 1991). Residence and modalities among assessed clients are discussed in greater detail in Chapter 6.

Referral Sources

Inpatient treatment clients were most likely to have been referred into treatment by another drug/alcohol treatment agency while outpatient treatment clients were most likely to have been referred into treatment by their schools.

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[1] High drug use is when "...a student uses drugs frequently, and risk of addiction is high. This implies daily use of marijuana, depressants, stimulants, tranquilizers or inhalants; monthly use of cocaine, opiates or hallucinogens; or weekly use of two or more drugs." High alcohol use is when "...a student drinks daily or binge drinks at least monthly." (OSPI, 1991).

Treatment History

Inpatient clients were the most likely to report having had a prior admission for drug/alcohol treatment.

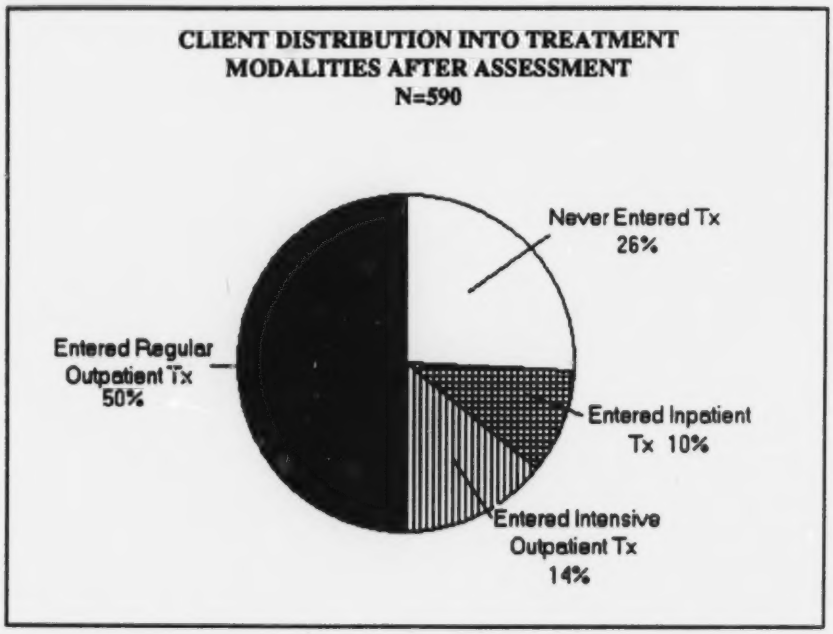
Court Involvement

44% of the clients who entered treatment were involved with the courts at the time of assessment. A significantly larger proportion of these clients were assigned to inpatient treatment than to outpatient treatment. This finding is discussed further in Chapter 5.

Completion of Treatment Plan

Clients assigned to inpatient treatment were far more likely to complete their treatment plan (62%) than clients in regular (32%) and intensive outpatient (14%) treatment. This point is discussed further in Chapter 3.

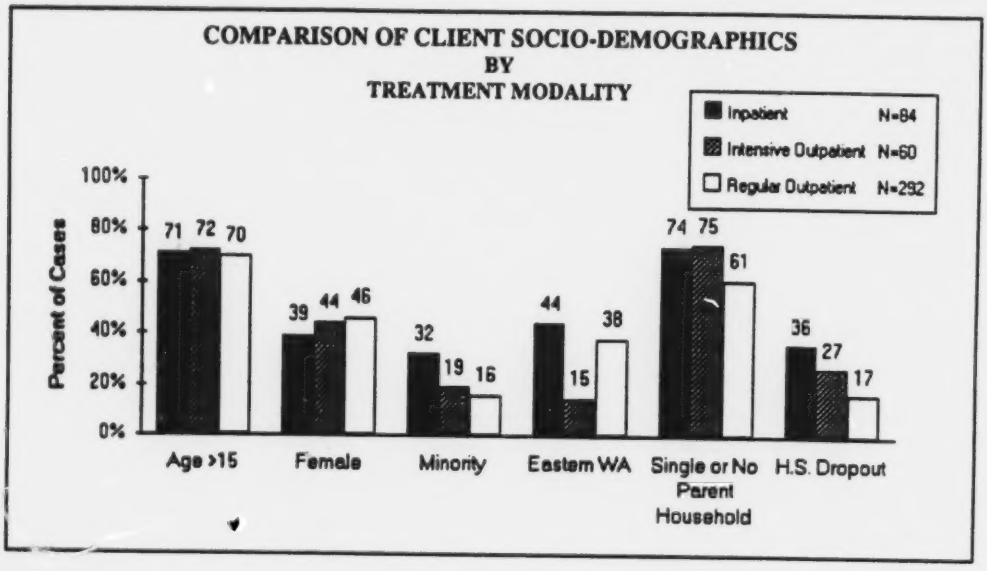
Graph 1 shows the percent of adolescents entering inpatient, intensive outpatient, and regular outpatient treatment, and the percent assessed but not entering treatment. Reasons for not entering treatment included: not having a serious enough drug or alcohol problem, not being eligible for DASA-funded treatment services, choosing not to enter, and moving.



Main Points:

- 26% of those assessed for treatment never entered treatment.
- 74% entered treatment: 50% entered regular outpatient, 14% intensive outpatient, and 10% inpatient treatment.

Graph 2 compares basic socio-demographic characteristics of clients assigned to three treatment modalities.



Main Points:

- There is no significant difference* in age or sex across the three treatment modalities.

- There is a significant difference in the proportion of minorities assigned to inpatient relative to outpatient modalities: 32% in inpatient, and 19% and 16% in intensive and regular outpatient, respectively. This difference exists in spite of similar addiction rates among minority clients: 51% of minority clients were assessed as addicted and 60% of non-minority clients were assessed as addicted (See Chapter 4 for a more detailed discussion of severity of use among minority groups).

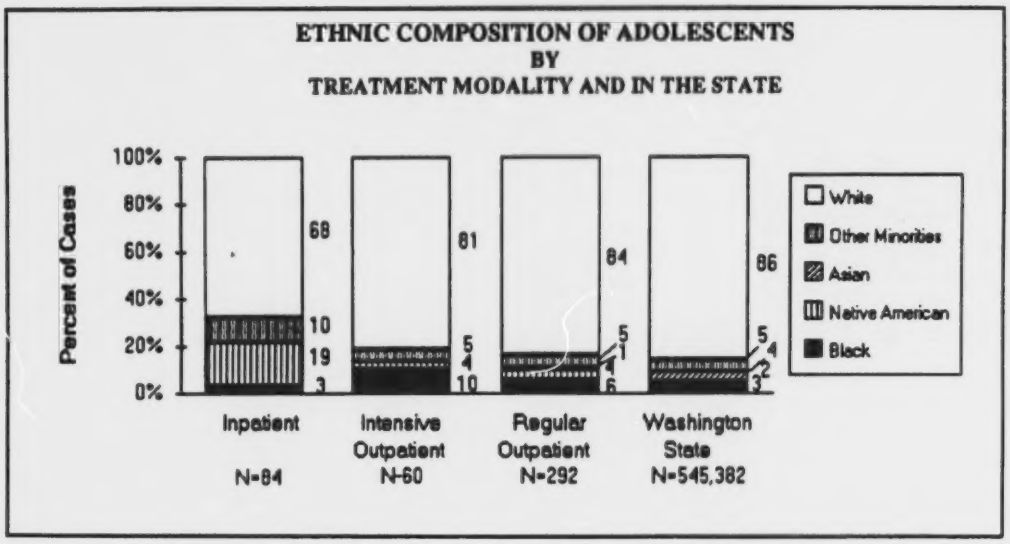
- 44% of inpatient clients and 38% of regular outpatient clients were from Eastern Washington, compared to only 15% of intensive outpatient clients. This difference is significant, but due largely to under representation in our sample of intensive outpatient agencies located in Eastern Washington and to the small number of these programs available in Eastern Washington.

- 74% of inpatient, 75% of intensive outpatient, and 61% of regular outpatient clients were from single or no parent households. The difference between regular outpatient and the other two modalities was found to be significant.

- The largest proportion of high school dropouts was in inpatient care (36%), compared to intensive (27%) and regular outpatient care (17%). The difference between inpatient clients and regular outpatient clients was significant.

*Significance in this report is defined as a difference of the magnitude $P_{.05}$ or better.

Graph 3 illustrates the ethnic composition of clients by treatment modality. A fourth bar showing the proportion of minorities among youth statewide is presented for comparison.



Main Points:

- Whites accounted for 81% of all clients and 84% of clients in regular outpatient treatment, 81% in intensive outpatient treatment, and 68% in inpatient treatment. Statewide, Whites constitute 86% of youth.

- Native Americans were the second largest group (after Whites) assigned to inpatient treatment. Although this ethnic group constitutes only 4% of the state's adolescent population, it makes up 19% of DASA's inpatient clients.

- Blacks were the second largest ethnic group represented among outpatient modalities where they constituted 10% of intensive and 6% of regular outpatient treatment.

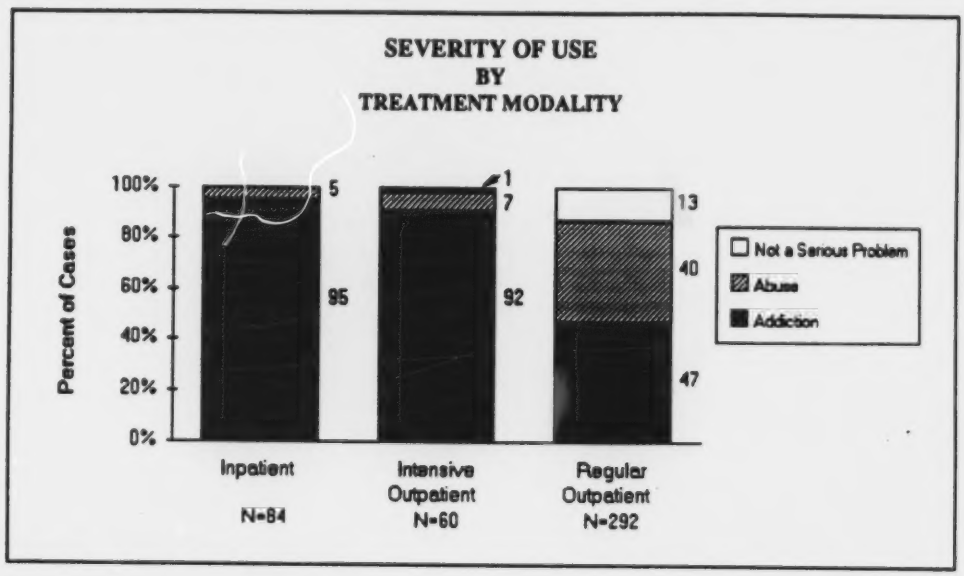
- Asians were only represented among regular outpatient clients, where they constituted 1% of the clients assigned to that modality. Asians represent 2% of the adolescent population in the state.

Graph 4 presents severity of drug use by treatment modality. Severity is defined by three levels of use:

- **Addiction**
- **Abuse**
- **Not a Serious Problem**

The level of use attributed to a client depends on the clinical judgement of the counselor administering the assessment.

Clients assessed as "addicted" are believed to be chemically dependent. "Abuse" refers to clients who use alcohol/drugs frequently and have problems associated with such use, but who do not exhibit or report symptoms or patterns of use suggestive of addiction. "Not having a serious problem" with drugs or alcohol is used to describe clients who experiment with drugs or alcohol but do not show signs of abuse or addiction.

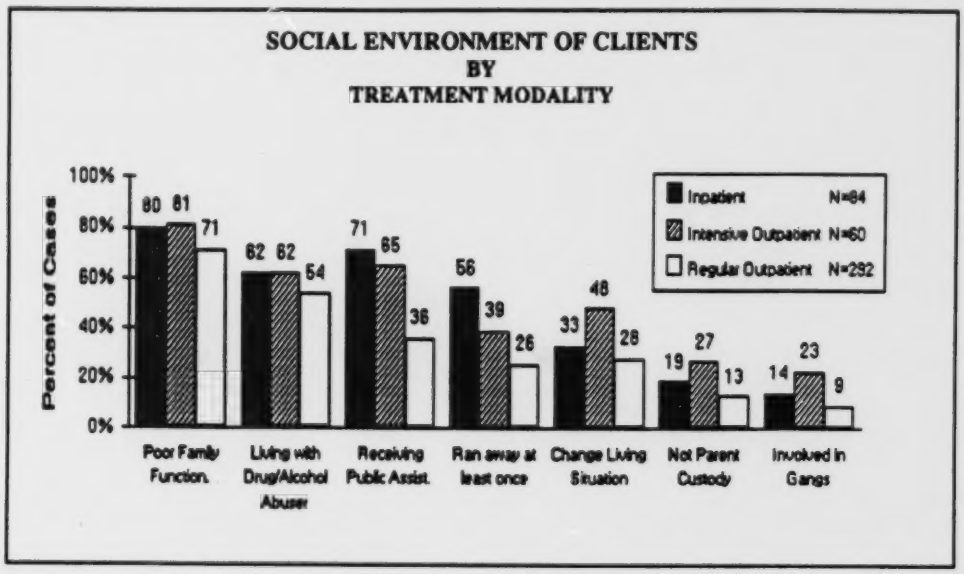


Main Points:

- The vast majority of clients in inpatient and intensive outpatient treatment modalities were assessed as addicted (95% and 92% respectively) while less than half of the clients in regular outpatient treatment were assessed as addicted (47%).

- Most of the clients assessed as not having a serious problem with drugs or alcohol entered regular outpatient treatment, although a few (1%) were assigned to intensive outpatient treatment. Most of these clients reported being involved with the courts and were mandated to enter treatment.

Graph 5 compares characteristics of clients' social environment across treatment modalities. Comparative data from Washington State were not readily available for most of these variables with the exception of one: the percent of children in families receiving public assistance. This figure in Washington State is 10% (IPPM 1990, p.26), which is much lower than the 71% found among inpatient clients, the 65% found among intensive outpatient clients or the 36% found among regular outpatient clients. Although data are not available on the percent of adolescents living with someone who abuses, the fact that nationally 10% of adults are addicted to alcohol suggests that the percent of DASA adolescent clients living with a drug/alcohol abuser is also considerably higher than the percent among other adolescents.



Main Points:

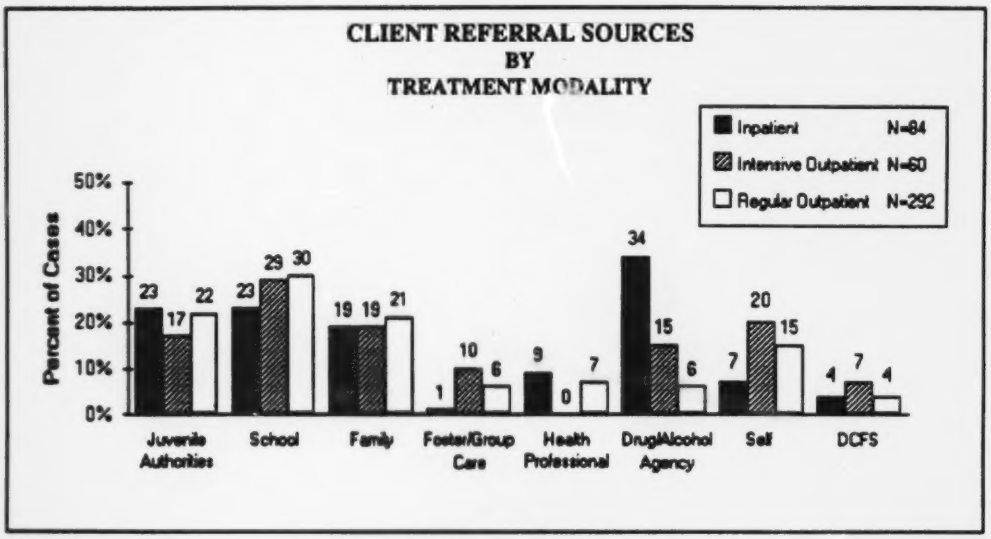
- Clients in intensive outpatient treatment were least likely to be in their parents' custody (27%), the most likely to have had a change in their living situation during the course of treatment (48%), and the most likely to have been involved with gangs (23%). These differences are significant.

- Clients entering inpatient treatment were more likely to report having run away from home (56%) than clients in outpatient treatment.

- A significantly larger percent of adolescents in both inpatient and intensive outpatient treatment reported that they or their families received public assistance than of clients in regular outpatient treatment.

- There was no significant difference in the percent of clients reporting living with someone else who abuses drugs and/or alcohol, or poor family functioning, across the three modalities.

Graph 6 presents client referral sources by treatment modality. A client may report more than one referral source. Consequently the percent presented for each modality may add up to more than 100%.

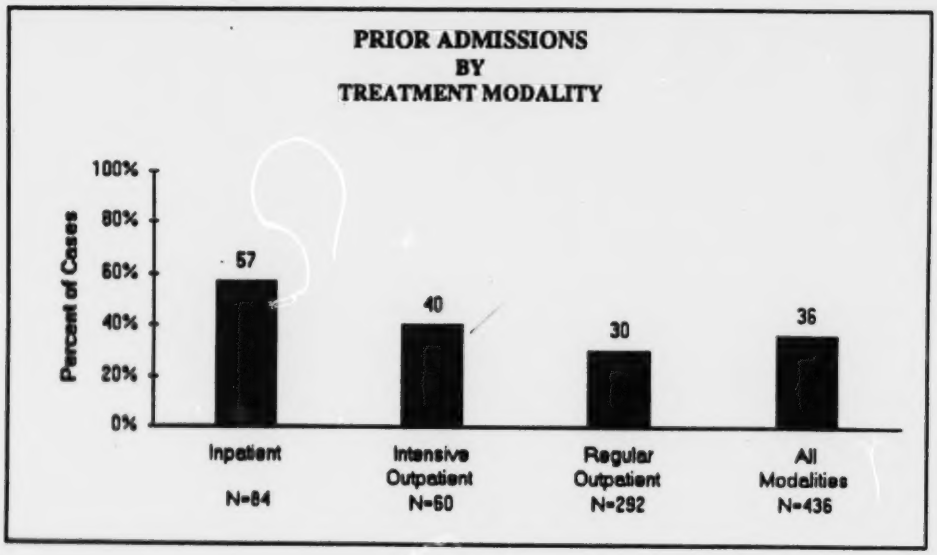


NOTES: Family = Parent, Sibling, or a Relative.
Health Professional = Doctor, Hospital, Mental Health Center, or a Private Counselor.
DCFS = Division of Children and Family Services (Includes Child Protective Services (CPS) and Family Reconciliation Services (FRS)).

Main Points:

- The most common referral sources for clients in inpatient treatment were drug and alcohol treatment agencies (34%), juvenile authorities (23%), and schools (23%).
- The most common referral sources for clients in outpatient treatment (both intensive and regular) were schools, juvenile authorities, family, and self.
- The largest difference in referral sources across the three treatment modalities occurred with drug/alcohol treatment agencies. Treatment agencies were far more likely to have been the referral source for inpatient clients than for outpatient clients.
- Family referrals were the most consistent across treatment modalities, comprising 19% each of inpatient and intensive outpatient referrals, and 21% of regular outpatient referrals.

Graph 7 shows the proportion of clients who have entered drug/alcohol treatment at least once prior to the current admission, by treatment modality.



Main Point:

- A significantly larger proportion of clients in inpatient treatment (57%) reported having entered drug/alcohol treatment previously, than clients in outpatient modalities.

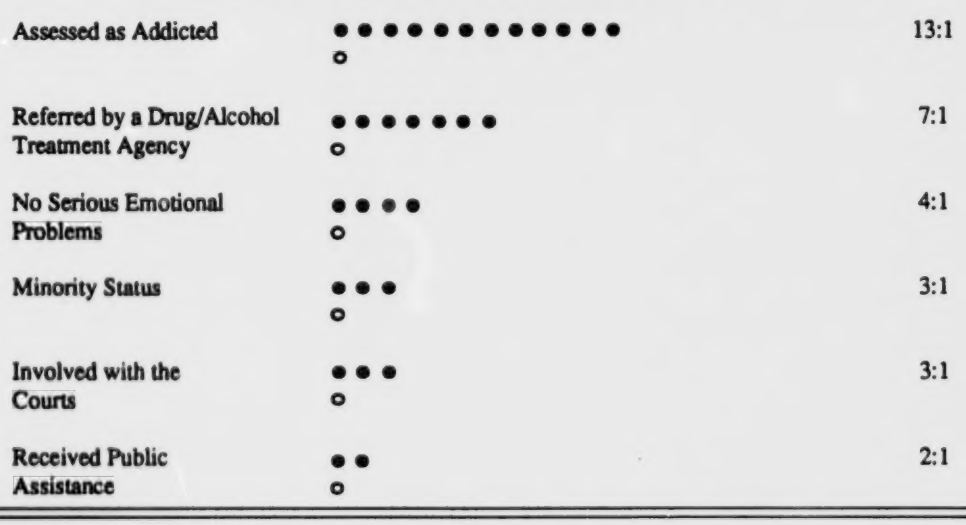
PREDICTING PLACEMENT IN INPATIENT TREATMENT

Variables included in a multiple regression analysis to identify predictors of inpatient placement were:

- assessed as addicted*
- referred into treatment by a drug/alcohol treatment agency*
- no serious emotional problems*
- minority status*
- involved with the courts*
- family or client received public assistance*
- female
- referred into treatment by a health professional
- from a single or no parent household
- Eastern Washington residence
- age 15 or less
- prior admission to treatment

All of these variables proved to be significant in chi-square analyses. The first six variables denoted by an asterisk (*) continued to be significant at the $P_{.05}$ level in a multi-variate analysis. This indicates that these six variables are strongly and independently related to inpatient placement, and that clients with these characteristics are significantly more likely to be placed in inpatient treatment than clients without these characteristics. Below, the odds-ratio of each variable is presented and discussed.

ODDS-RATIOS OF BEING ASSIGNED TO INPATIENT TREATMENT



Main Points:

- Clients assessed as addicted were 13 times as likely to have been placed in inpatient treatment as clients not assessed as addicted.
- Clients referred by a drug/alcohol treatment agency were 7 times as likely to be placed in inpatient treatment as clients not referred by a drug/alcohol treatment agency.
- Clients with no serious emotional problems were 4 times as likely to enter inpatient treatment as clients with serious emotional problems.
- Minority clients were 3 times as likely as non-minorities to be assigned to inpatient treatment.
- Clients involved with the courts were 3 times as likely to be assigned to inpatient treatment as clients not involved with the courts.
- Clients receiving public assistance were 2 times as likely to be assigned to inpatient treatment as clients not on public assistance.

PREDICTING PLACEMENT INTO INTENSIVE OUTPATIENT TREATMENT

Two multiple regressions were run to identify predictors of client placement in intensive outpatient treatment. The first compared clients placed in inpatient treatment with those placed in intensive outpatient treatment. The second compared clients placed in regular outpatient with those placed in intensive outpatient. A two way analysis was necessary since the group of clients who were not placed in intensive outpatient treatment included those in need of more serious treatment as well as those in need of less serious treatment. The variables included in these analyses were:

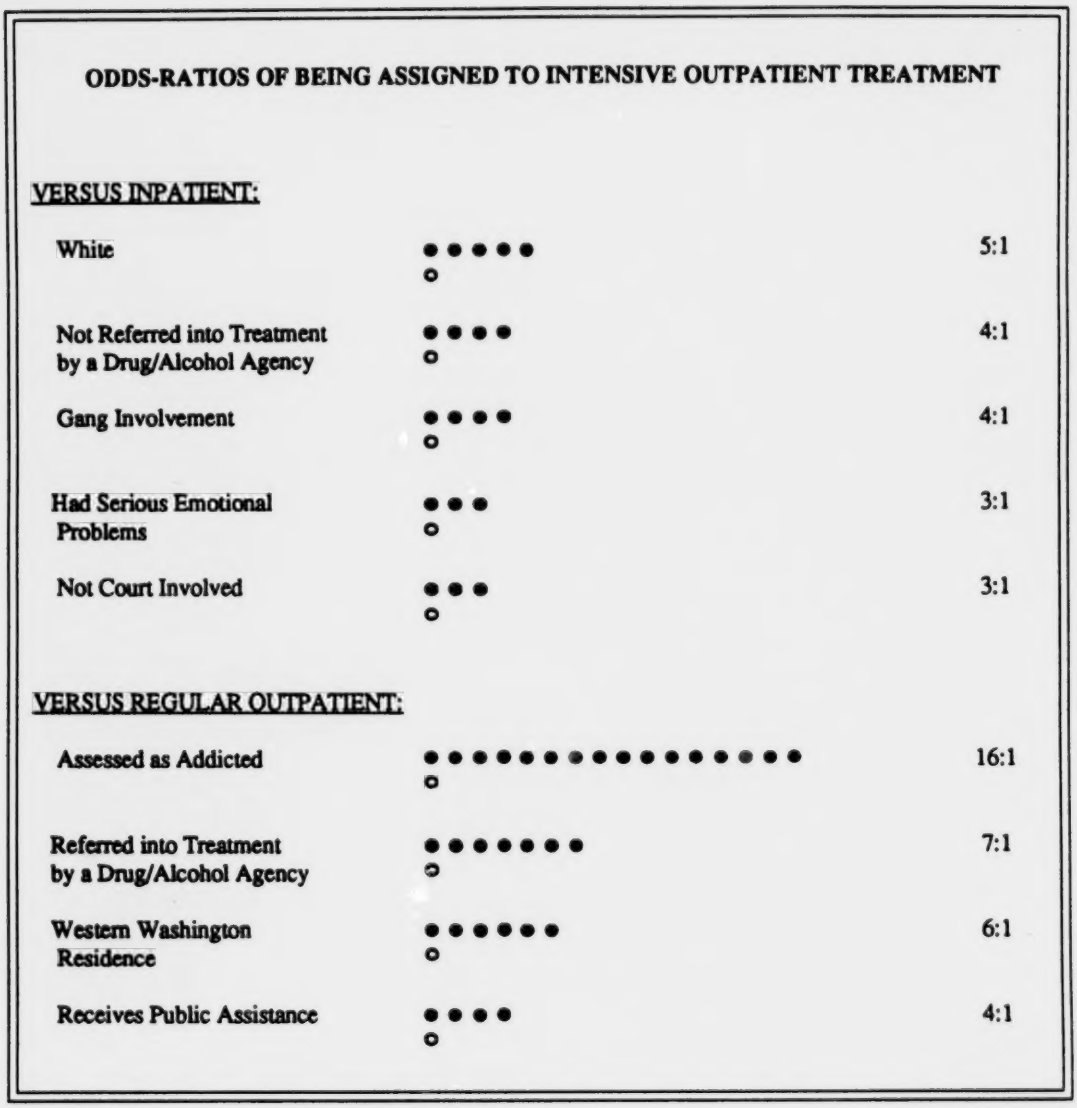
- non-minority status (White)*
- not referred into treatment by a drug or alcohol treatment agency*+
- involved with gangs*
- had serious emotional problems*
- not involved with the courts*
- assessed as addicted+
- Western Washington residence+
- family or client received public assistance+
- female
- age 15 or less
- from a single or no parent household
- not under parent's custody
- prior admission to treatment
- uses drugs (with or without alcohol)

The five variables marked with an asterisks (*) were significant at the $P_{0.05}$ level in the multiple regression comparing intensive outpatient clients to inpatient clients. The four variables marked with a plus sign (+) were significant at the $P_{0.05}$ level in the regression comparing intensive outpatient to regular outpatient clients.

Main Points:

- White clients were 5 times as likely as minority clients to be assigned to intensive outpatient treatment rather than inpatient treatment.
- Clients who were referred into treatment by a drug/alcohol treatment agency were 4 times as likely to be placed in inpatient treatment over intensive outpatient treatment and 7 times as likely to be placed in intensive over regular outpatient treatment as clients referred by other sources.
- Gang involved clients were 4 times as likely to be assigned to intensive outpatient treatment over inpatient treatment as clients without gang involvement.
- Clients with serious emotional problems were 3 times as likely to be assigned to intensive outpatient treatment over inpatient treatment as clients without any serious emotional problems.
- Clients who were not court involved were 3 times as likely to be assigned to intensive outpatient treatment over inpatient treatment as clients who were court involved.
- Clients assessed as addicted were 16 times as likely to be placed in intensive outpatient treatment over regular outpatient treatment as clients who were not assessed as addicted.
- Western Washington clients were 6 times as likely to be placed in intensive outpatient over regular outpatient treatment as Eastern Washington clients.
- Clients who received public assistance were 4 times as likely to be assigned to intensive outpatient over regular outpatient as clients who did not receive public assistance.

ODDS-RATIOS OF BEING ASSIGNED TO INTENSIVE OUTPATIENT TREATMENT



PREDICTING PLACEMENT IN REGULAR OUTPATIENT TREATMENT

Variables included in a multiple regression analysis to identify predictors of regular outpatient placement were:

- not assessed as addicted *
- family or client was not receiving public assistance *
- non-minority status (White) *
- Eastern Washington residence *
- never runaway *
- was involved with the courts
- female
- age greater than 15
- from a single or no parent household
- high school dropout
- referred into treatment by school
- prior admission
- not under parent's custody
- was involved with gangs
- never used IV drugs

The five variables marked with an asterisk (*), continued to be significant at the $P_{0.05}$ level in the multiple regression analysis.

ODDS-RATIOS OF BEING ASSIGNED TO REGULAR OUTPATIENT TREATMENT

Main Points:

- Clients who were not assessed as addicted, (who were assessed as abusing or not having a serious drug or alcohol problem) were 21 times as likely to be assigned to regular outpatient treatment as clients assessed as addicted.
- Clients who were not receiving public assistance were 4 times as likely to be assigned to regular outpatient treatment as clients on public assistance.
- White clients were 3 times as likely to be placed in regular outpatient treatment as minority clients.
- Eastern Washington clients were 2 times as likely to be assigned to regular outpatient treatment as Western Washington clients.
- Clients who had never run away from home were 2 times as likely to enter regular outpatient treatment as clients who had run away.

SUMMARY

This chapter looked at client placement into inpatient, intensive outpatient, and regular outpatient treatment modalities. A little more than one quarter (26%) of the clients assessed never entered treatment; half (50%) entered regular outpatient treatment; 14% entered intensive outpatient; and 10% entered inpatient treatment.

High proportions of minorities, older clients, high school dropouts and clients from single or no parent households were represented among the three treatment modalities.

Results from a multiple regression identified predictors of inpatient over outpatient placement as: being assessed as addicted, referred by a drug/alcohol treatment agency, absence of serious emotional problems, minority status, involved with the courts, and receiving public assistance.

Predictors of regular outpatient placement over intensive outpatient and inpatient placement included: not being assessed as addicted, not receiving public assistance, being White, living in Eastern Washington, and never having run away.

CHAPTER 3: CLIENT RETENTION

Client retention is studied at three stages of the treatment process:

- **Assessment**
- **Admission into a Program**
- **Completion of Planned Treatment**

The first stage, assessment, refers to the clinical evaluation of an adolescent's drug use and need for treatment. Referrals for assessment can be made to any DASA-contracted adolescent treatment provider. Most often they are made to an outpatient provider who refers adolescents to inpatient facilities when appropriate.

The second stage, admission into a treatment program, implies that the adolescent received at least one day of treatment following assessment. The last stage means the client completed the treatment plan designed specifically for him or her by a drug and alcohol counselor. The length and content of this treatment plan varies by modality and is tailored to the needs of the client. Completion of the treatment plan is only a rough measure of "success", since there can be "success" without completion of the plan.

There is a loss of clients at each stage of treatment. Loss between stages may reflect positive, negative or neutral occurrences. An example of a positive loss between assessment and admission would be when clients did not enter treatment because their drug use was not serious. An example of a neutral loss between admission and treatment completion would be when clients drop out after they stop using drugs and do not feel a need to continue working on their treatment plan.

This chapter looks at retention of clients between assessment and entrance into a treatment program, and between entrance and completion of a treatment program. The focus of the first part is on clients assessed as addicted who did not enter treatment. The second part deals with clients of all severity levels who entered treatment.

Clients' severity of use, socio-demographic characteristics, referral sources, physical health, emotional and developmental problems, reasons for leaving treatment, length of treatment, and social environment are all examined.

Characteristics that are related to the likelihood that a client will enter treatment after assessment are identified. In addition, characteristics that help predict whether or not a client is likely to complete his or her treatment plan are discussed.

MAJOR FINDINGS

Retention of the Different Modalities

Inpatient treatment had the best client retention pattern of all three modalities. 97% of the adolescents assessed for inpatient treatment entered, and 62% of those who entered inpatient treatment completed.

Socio-Demographic Characteristics

Of those assessed as addicted, minority clients were significantly more likely to enter treatment than non-minority clients.

Females and high school dropouts were less likely to have completed their treatment plan.

Substance Use

45% of those assessed but not entering treatment were assessed as addicted.

Fewer completers were assessed as addicted (47%) than non-completers (72%). Addicted persons appear harder to keep in treatment.

Physical, Emotional and Developmental Problems

Adolescents who did not complete treatment were twice as likely as completers to report having a physical, emotional or developmental problem.

Referral Sources

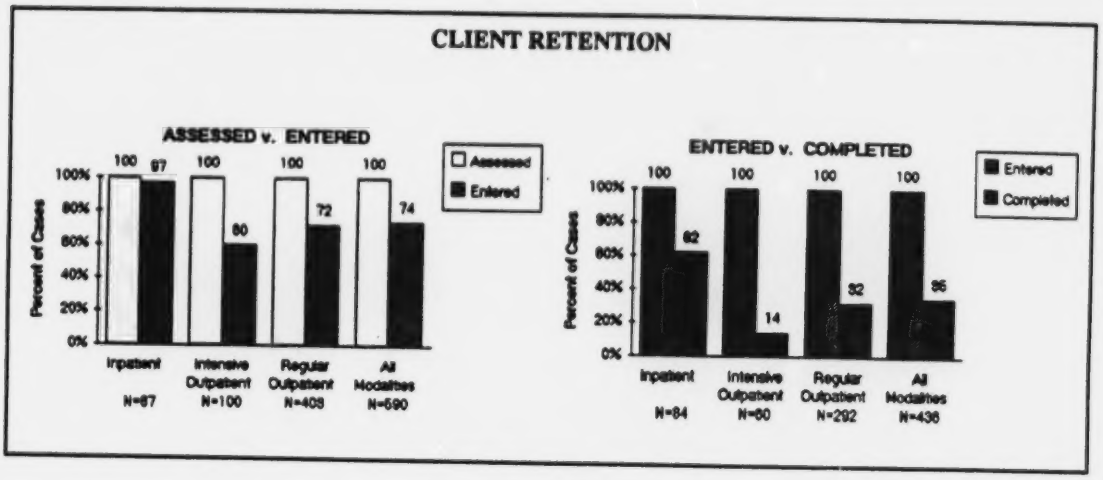
Clients referred into treatment by a drug/alcohol treatment center were by far the most likely to actually enter treatment. Most of these clients entered inpatient treatment.

Clients referred into treatment by their schools or juvenile authorities were most likely to have completed their treatment.

Social Environment

Adolescents who completed treatment were significantly less likely to report gang involvement or poor family functioning, and more likely to report that a family member participated in their treatment.

Graph 8 shows the number of adolescents in the sample assigned to the three different treatment modalities and their retention between assessment and entrance into a treatment program, and between entrance and completion of a program.

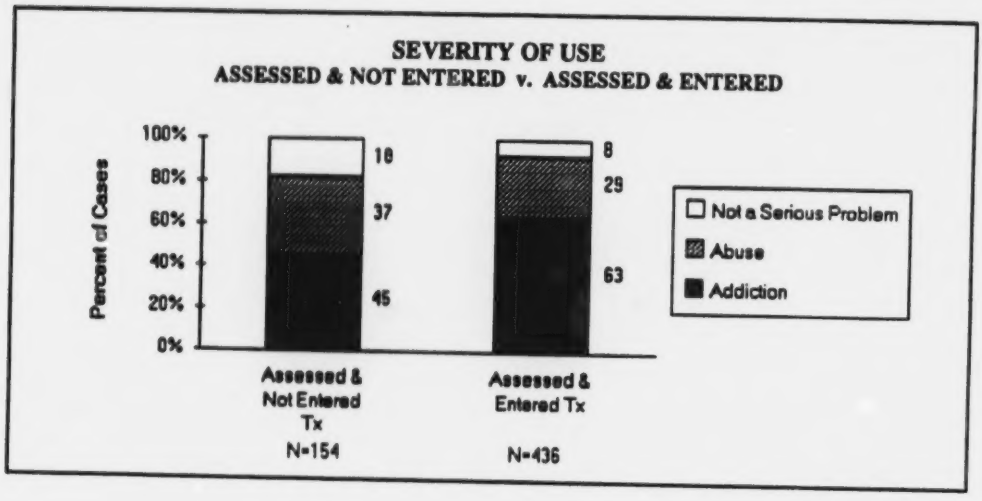


Main Points:

- 74% of all assessed clients entered treatment. The percent entering varied by modality. 98% of the clients assessed for inpatient treatment entered, compared to 72% of those assessed for regular outpatient treatment, and 60% of those assessed for intensive outpatient treatment.

- 35% of all clients who entered treatment completed their treatment plan. The highest retention rate occurred among clients who entered inpatient treatment. The rate for this group was 62% compared to 14% and 32% for intensive and regular outpatient modalities, respectively.

Graph 9 illustrates the severity levels of alcohol/drug use for clients who entered treatment compared to those that did not enter treatment.

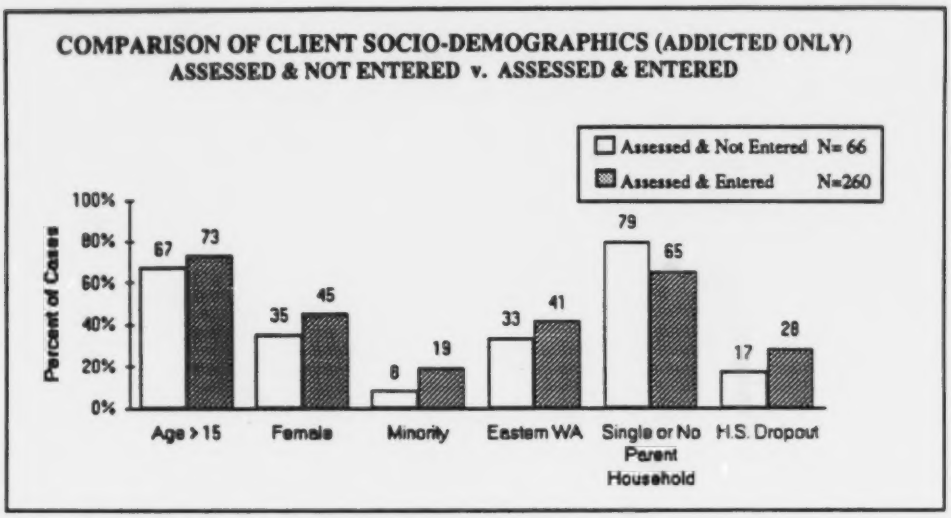


Main Points:

- Adolescents who were assessed but did not enter treatment were less likely to have been assessed as addicted (45% as compared to 63%), and more likely to have been assessed as not having a serious alcohol or drug problem (18% as compared to 8%) than those who entered treatment.

- A similar proportion of each group (82% of those assessed and not entering treatment and 92% of those assessed and entering treatment) were assessed as abusing or addicted. While some of the apparently untreated adolescents may have entered another treatment program (i.e., not DASA-funded), others may have gone untreated. The data collected do not tell us why these clients did not enter treatment.

Graph 10 compares the socio-demographic characteristics of clients assessed as addicted who received DASA-funded assessment services but not treatment services, with clients who were assessed as addicted and received both DASA-funded assessment and treatment services.

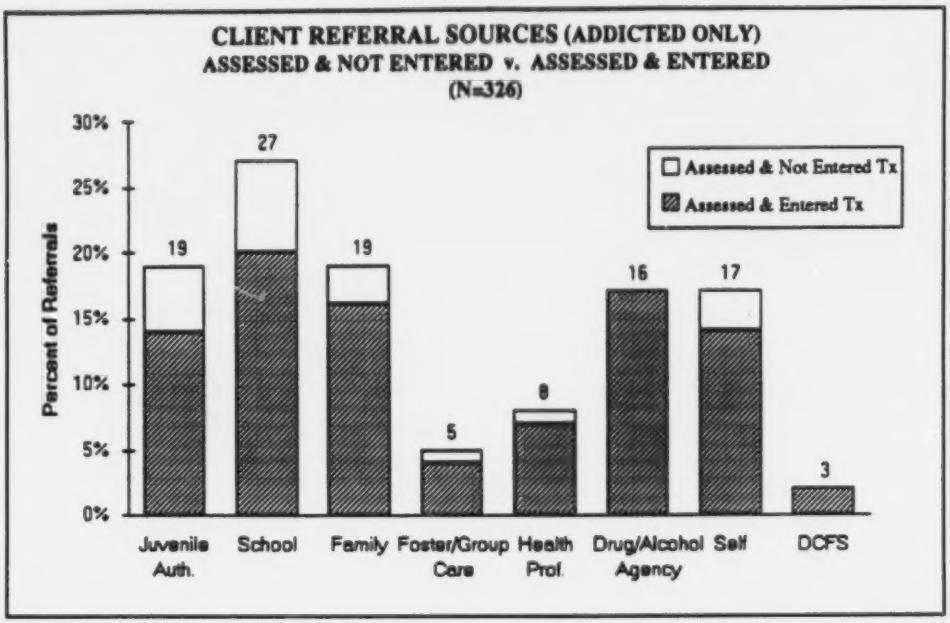


Main Points:

- There was no significant difference between those assessed as addicted who did not enter treatment and those assessed as addicted who did enter treatment in terms of the proportion of: those older than 15, females, high school dropouts, Eastern Washington residents, or those from a single or no parent household.

- Addicted minority clients were more likely to enter treatment than White clients. This difference was found to be significant.

Graph 11 shows the percent of all referral sources accounted for by each referral source. It also shows the proportion of each referral source composed of clients who were assessed as addicted and entered treatment as well as the proportion who were assessed as addicted but did not enter treatment. Note that this graph has a different format than the other referral graphs presented in this report.



Main Points:

- School, juvenile authorities, and families were the most commonly reported referral sources among clients assessed as addicted.
- Almost all the adolescents assessed as addicted who were referred by a health professional, a drug/alcohol treatment agency, DCFS, or foster/group care, entered treatment. This is shown by the small or nonexistent white portions of the bars in the graph above.
- The vast majority of all referrals for assessment (more than 75% of any one source) lead to treatment, as indicated by the large shaded areas of each bar.

PREDICTING NOT ENTERING TREATMENT AMONG CLIENTS ASSESSED AS ADDICTED

Variables included in a multiple regression analysis to predict which clients assessed as addicted would not enter treatment included:

- not referred by a drug/alcohol treatment agency*
- non-minority status (White)*
- male*
- family or client received public assistance*
- used alcohol only
- age 15 or less
- most important person does not support treatment
- from a single or no parent household
- Western Washington residence
- had serious emotional problems
- involved with the courts

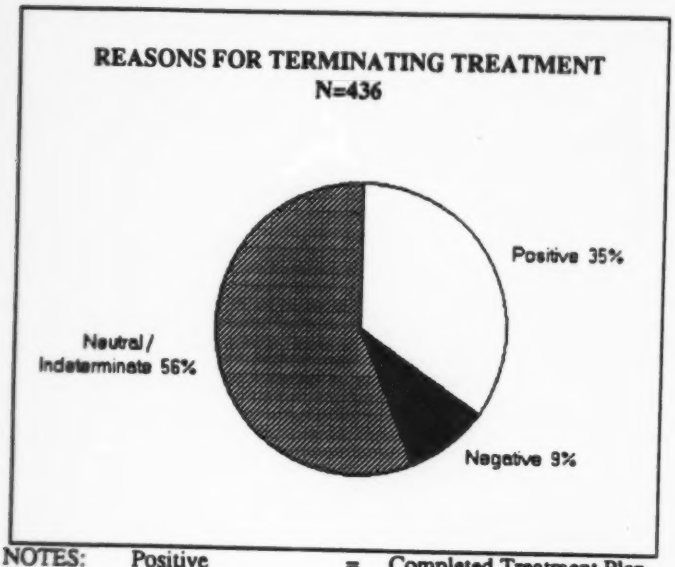
The four variables denoted by an asterisk (*) continued to be significant at the $P_{0.05}$ level once all the variables were entered. These were the items most strongly associated with entering or not entering treatment. The odds-ratios of these variables is presented and discussed below.

ODDS-RATIOS OF BEING ASSESSED AS ADDICTED AND NOT ENTERING TREATMENT

Main Points:

- Addicted clients who were not referred into treatment by a drug/alcohol treatment agency were 12 times as likely, to not enter treatment, as addicted clients who were referred by a drug/alcohol agency.
- White clients assessed as addicted were 7 times as likely not to enter treatment as minority clients who were assessed as addicted.
- Addicted male clients were 5 times as likely as addicted female clients to not enter treatment.
- Addicted clients who were receiving public assistance were 5 times as likely to not enter treatment as addicted clients who were not receiving public assistance.

Graph 12 shows the proportion of clients terminating treatment for various reasons including completion of their treatment plan (positive), administrative discharge or legal complications (negative), or some other unknown reason (neutral or indeterminate).



NOTES:

Positive	=	Completed Treatment Plan
Negative	=	Administrative Discharge or Legal Complication (e.g., parole revoked)
Neutral/Indeterminate	=	Voluntary Departure, Transfer to Another Program, or Unknown Reason

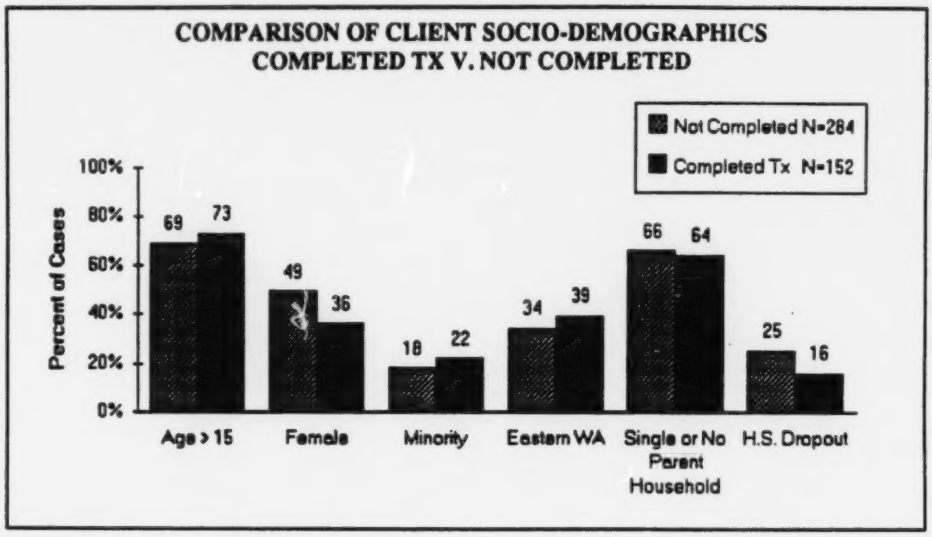
Main Points:

- 35% of the clients who entered treatment completed their treatment plan, while 65% did not complete their plan. As was shown in graph 8, this percent differed significantly by treatment modality.

- 9% did not complete treatment due to a negative event. They were either administratively discharged for unacceptable behavior or were involved in illegal activity. Looking at the data by modality indicates that 17% of inpatient clients, 14% of intensive outpatient clients and 6% of regular outpatient clients terminated treatment due to a negative event (See Table 5 in Appendix A).

- The majority, 56%, voluntarily left treatment, were transferred to another program, cited some "other" reason for leaving treatment, or terminated for an unknown reason. All of these actions are included in the neutral/indeterminate category. Looking at the data by modality indicates that 72% of intensive outpatient clients, 62% of regular outpatient clients, and 21% of inpatient clients terminated treatment for a neutral/indeterminate reason.

Graph 13 presents the socio-demographic characteristics of clients who completed their treatment plan and clients who did not complete their treatment plan.



Main Points:

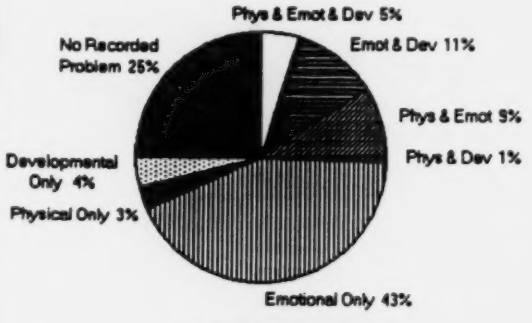
- Females and high school dropouts were less likely to complete their treatment plan. These differences were found to be significant in the analysis of clients from all modalities and in the analysis of clients from regular outpatient treatment only (See Tables 7A and 7D in Appendix A). No significant differences were found on these two variables among clients assigned to intensive outpatient or inpatient modalities.

- Age, geographic residency, coming from a single or no parent household and minority status were similar for those who completed their treatment plan and those who did not. This was true across all three modalities.

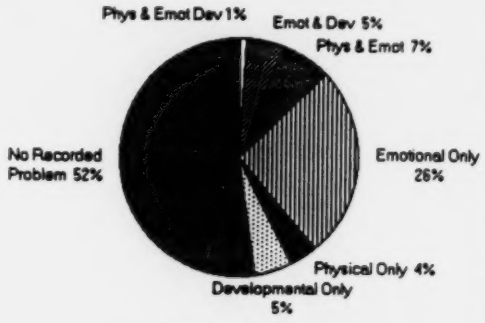
Graph 14 compares the presence of serious physical, emotional or developmental problems among clients who completed treatment with those who did not.

Presence of these problems was based on the clinical judgement of counselors interviewed. A serious physical health problem was defined as a "chronic or acute health condition, or symptoms sufficient to warrant professional attention." Developmental problems referred to "any signs of significant intellectual or developmental impairment," and emotional problems referred to the presence of "significant psychiatric or emotional problems."

PHYSICAL HEALTH, EMOTIONAL AND DEVELOPMENTAL PROBLEMS



NOT COMPLETED
N=284



COMPLETED TX
N=152

NOTES:

Emot	=	Serious emotional or psychiatric problem
Dev	=	Serious developmental or intellectual impairment
Phys	=	Acute or chronic physical health condition or symptom sufficient to warrant professional attention

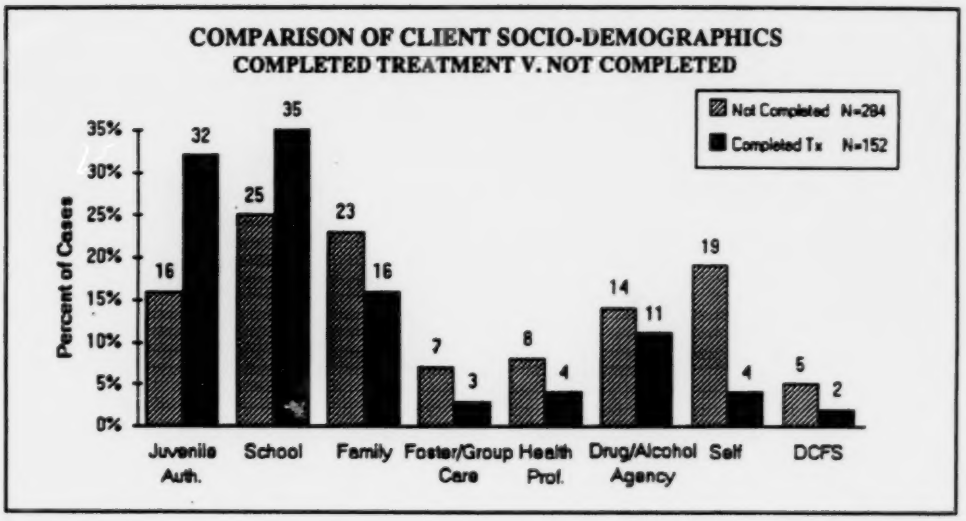
Main Points:

- No significant difference was found in physical health between completers and non-completers when looking at the group of non-completers as a whole. Examining the data by modality, however, indicates that the difference is significant among regular and among intensive outpatient clients, but not among inpatient clients.

- 75% of non-completers from all three modalities had a serious physical, emotional and/or developmental problem in addition to their drug/alcohol problem, compared to only 48% of completers. Looking at the data by modality indicates that this difference is only significant among regular outpatient clients.

- In both groups, emotional problems were the most commonly reported: 44% of completers and 72% of non-completers. This was true across all three modalities.

Graph 15 presents the referral sources for clients who did not complete treatment and compares them to those who did complete treatment.

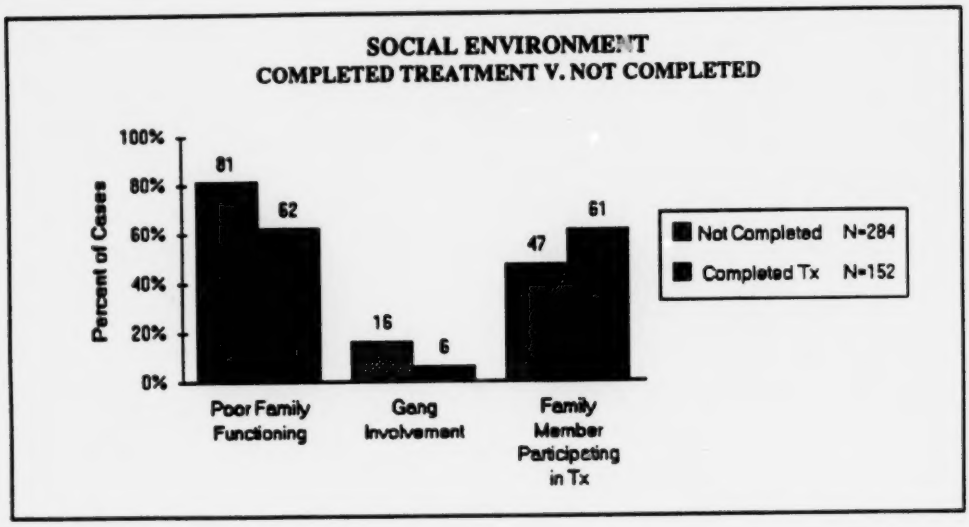


Main Points:

- Clients who were referred into treatment by juvenile authorities or by their school were most likely to have completed their treatment. 35% of completers were referred by their schools compared to 25% of non-completers. Similarly, 32% of completers were referred by juvenile authorities compared to 16% of non-completers. This pattern was particularly true among outpatient treatment clients.

- Clients who were self-referred into treatment were among those least likely to have completed their treatment plan. Looking at the data by modality, intensive outpatient clients referred by foster/group care, a drug/alcohol agency or by DCFS also had a low likelihood of completing treatment.

Graph 16 compares adolescents who completed treatment with those who did not complete treatment by selected characteristics of their social environment.

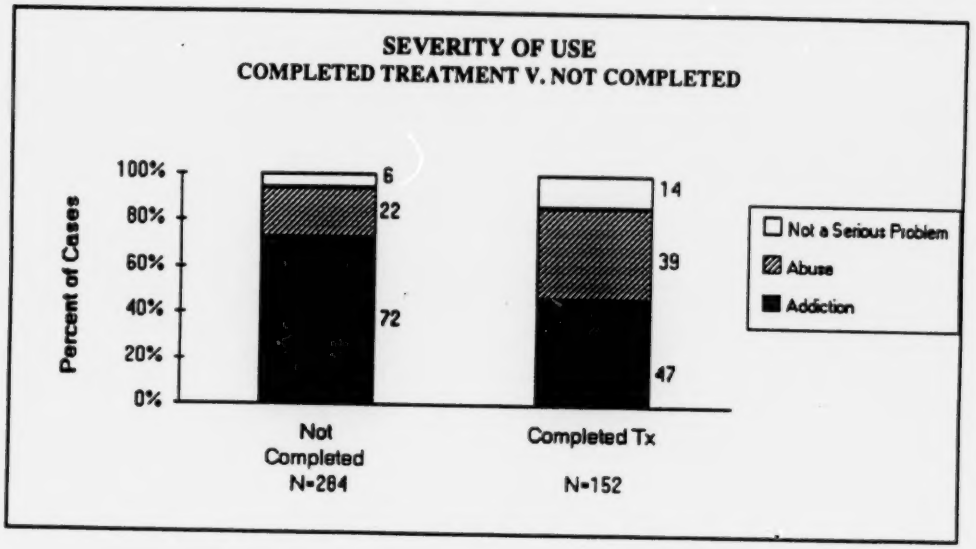


Main Points:

- Clients who reported poor family functioning or gang involvement were significantly less likely to have completed treatment. Looking at the data by modality indicates that this was true among regular outpatient clients, but not among intensive outpatient or inpatient clients.

- Clients who had a family member participate in their treatment were significantly more likely to have completed treatment. Looking at the data by modality indicates that this was significant among inpatient treatment clients, but not among clients from outpatient modalities.

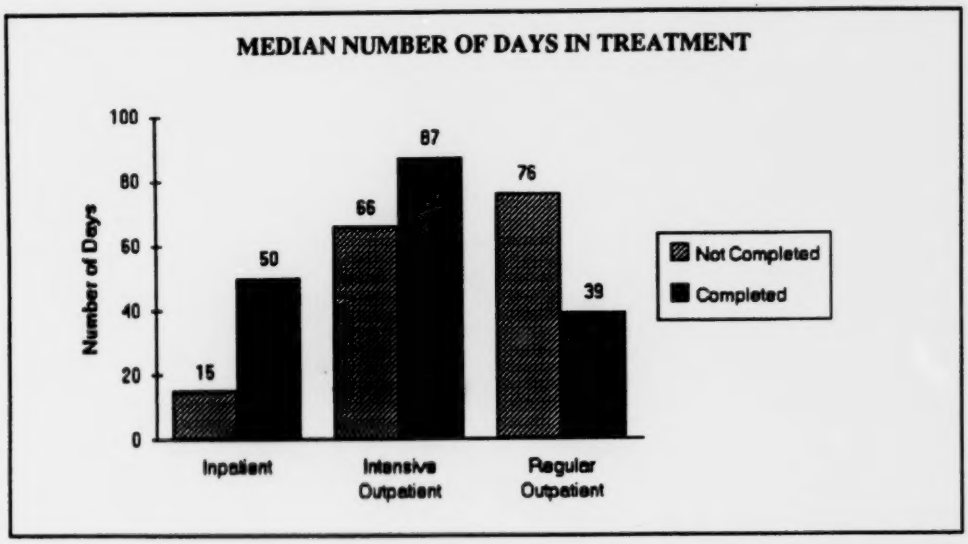
Graph 17 compares severity of drug use at assessment for clients who completed treatment with those who did not complete treatment.



Main Point:

- Clients who did not complete treatment had, at assessment, more severe drug and/or alcohol problems than clients who did complete their treatment plan. 72% of non-completers were assessed as addicted compared to only 47% of completers. These differences were most pronounced among clients assigned to outpatient modalities. Since the vast majority (about 95%) of completers and non-completers assigned to inpatient treatment were assessed as addicted, no significant difference was found among inpatient treatment clients (See Table 7B in Appendix A).

Graph 18 shows the median number of days completers and non-completers were in treatment, by the modality in which they were treated. Adolescents with more serious drug/ alcohol problems tend to have longer treatment plans. This provides them with more opportunities or days to leave the program before completing their plan.



Main Points:

- Non-completers in outpatient modalities have considerable exposure to treatment (66 days on average for intensive outpatient and 76 days on average for regular outpatient treatment). This exposure may yield benefits, even when the treatment plan is not completed.

- Inpatient treatment had the largest difference in the median number of days in treatment between completers and non-completers. Non-completers received a median of 15 days of treatment compared to 50 days for completers.

- Intensive outpatient clients who completed treatment had a median duration of 87 days. The median length of treatment for non-completers was 66 days.

- Non-completers in regular outpatient had a higher median number of days in treatment than completers. Non-completers were more likely to have been assessed as addicted and consequently are more likely to have had longer treatment plans.

PREDICTING NON-COMPLETION OF TREATMENT PLAN

Three multiple regressions were run to predict non-completion, one for each modality of treatment. Separate analyses were done because of the different completion rates associated with each modality. Variables included in all three multiple regression analyses were:

- female
- age 15 or less
- minority status
- from a single or no-parent household
- Eastern Washington residence
- family or client received public assistance
- had serious emotional problems
- assessed as addicted
- reported poor family functioning
- not referred into treatment by school
- self-referred into treatment
- did not have a family member participate in treatment
- was a high school dropout
- was not involved with the courts
- had serious developmental problems

Inpatient

None of the above variables were found to be significant predictors of non-completion among inpatient clients.

Intensive Outpatient

The number of clients in the sample who completed intensive outpatient treatment was too small to permit a regression analysis to identify predictors of completion among intensive outpatient clients.

Regular Outpatient

Six variables proved to be significant at the $P_{.05}$ level once the variables were entered into the regression equations. These predictors are presented and discussed below.

ODDS-RATIOS OF NOT COMPLETING REGULAR OUTPATIENT TREATMENT

Self-Referred into Treatment	●●●●●●●●●●● ○	11:1
Had Serious Emotional Problems	●●●● ○	4:1
Assessed as Addicted	●●●● ○	4:1
Poor Family Functioning	●●●● ○	4:1
No Family Member Participated in Treatment	●●●● ○	4:1
Not Referred into Treatment By School	●●●● ○	4:1

Main Points:

- Clients who were self-referred into regular outpatient treatment were 11 times as likely not to complete treatment as clients who were not self-referred.
- Clients with serious emotional problems were 4 times as likely not to complete regular outpatient treatment as clients without any serious emotional problems.
- Clients assessed as addicted were 4 times as likely not to complete regular outpatient treatment as clients who were not assessed as addicted.
- Clients who reported poor family functioning were 4 times as likely not to complete regular outpatient treatment as clients who did not report poor family functioning.
- Clients who did not have a family member participate in their treatment were 4 times as likely not to complete regular outpatient treatment as clients who did have a family member participate in their treatment.
- Clients who were not referred into regular outpatient treatment by their schools were 4 times as likely not to have completed treatment as clients who were referred by their schools.

SUMMARY

This chapter followed adolescents through three stages of the treatment process: assessment, entry into treatment, and completion of the planned treatment.

26% of those assessed did not enter treatment. Of these, some 45% were assessed as addicted. Addicted clients who did not enter treatment differed from those who entered treatment in that they were less likely to have been referred by a drug/alcohol treatment agency. They were more likely to have been white, male, and receiving public assistance than their addicted counterparts who did enter treatment.

The completion rates for those who entered treatment were: 62% for inpatient, 14% for intensive outpatient, and 32% for regular outpatient. No predictors of non-completion were found to be significant among inpatient clients and the number of intensive outpatient clients was too small to permit multiple regression analysis. Several predictors, however, were identified as significant among regular outpatient clients. These clients were more likely to have: been self-referred into treatment, had no family member participate in their treatment, serious emotional problems, been assessed as addicted, reported poor family functioning, and not been referred into treatment by their school.

CHAPTER 4: CLIENT SUBSTANCE USE

This chapter discusses client alcohol and/or drug use in terms of severity of use and substances used. Clients' alcohol and drug use were categorized as follows:

- **Alcohol Only**
- **Drugs Only**
- **Alcohol and Drugs**

The three severity levels of **Addiction, Abuse,** and **Not a Serious Problem,** were also used. (Currently DASA is considering changing the terminology of the least serious category, "Not a Serious Problem" to "Misuse of Chemical Substances").

Severity of use and substances used were determined by the counselor administering the drug and alcohol assessment. Typically this assessment was not based on a biochemical diagnostic examination (such as urinalysis) but rather on the clinical judgement of the counselor through a personal interview and/or written questionnaire.

Clients' socio-demographic characteristics, social environment, health, emotional and developmental problems are analyzed by type of substances used and severity level.

MAJOR FINDINGS

Socio-Demographic Characteristics

Older clients (age > 15) were more likely to be assessed as addicted (72%).

78% of Native American clients were assessed as addicted and 93% reported using both drugs and alcohol. These rates were the highest of all the ethnic groups studied and were not due to any differences in age between the various groups.

Asian (43%) and Hispanic (32%) clients, were most likely to be assessed as not having a serious drug or alcohol problem.

Asians mostly reported using alcohol only (57%), whereas Blacks (27%), Whites (27%) and Hispanics (19%) were less likely to report using alcohol only.

As a group, minority clients were less likely to be assessed as addicted and more likely to be assessed as not having a serious drug and alcohol problem than non-minority clients.

Clients from Eastern Washington were more likely to have been assessed as addicted than those from Western Washington.

Severity of use and substances used were similar between the sexes.

High school dropouts were more likely to be assessed as addicted or abusing than other clients.

Clients from single or no parent households were more likely to have been assessed as addicted or abusing than clients from dual parent households.

Social Environment

Addicted clients were more apt to have run away, to be in need of public assistance or social services, to be involved with gangs, and not to have had a family member participate in their treatment, than abusers and those assessed as not having a serious alcohol or drug problem.

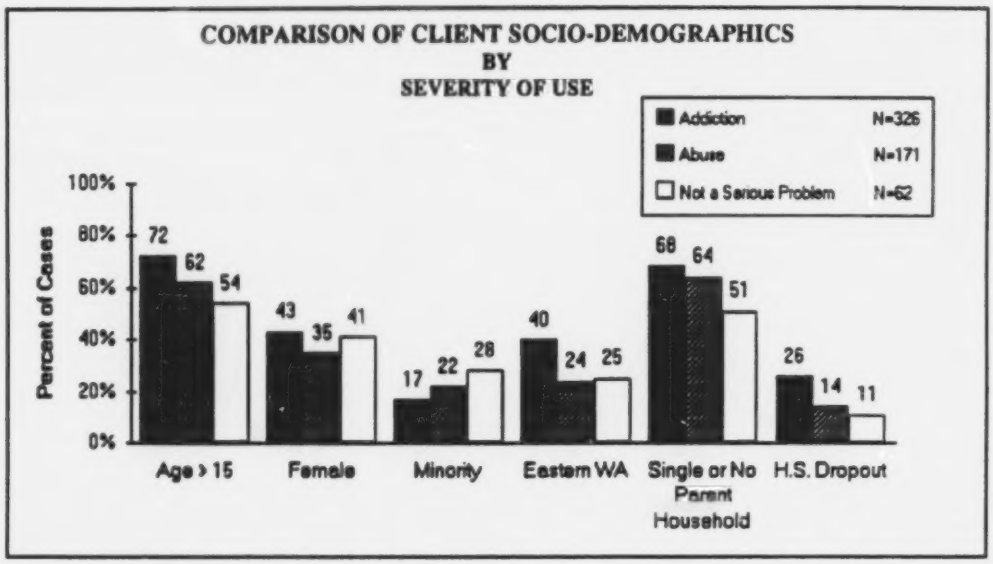
A much smaller proportion of clients assessed as not having a serious drug or alcohol problem reported poor family functioning (22%) compared to those assessed as abusers (77%) and those assessed as addicted (80%).

Physical, Emotional and Developmental Problems

The proportion of clients with serious emotional problems increased significantly with severity of use.

Clients with developmental problems were more likely to be assessed as addicted or abusing.

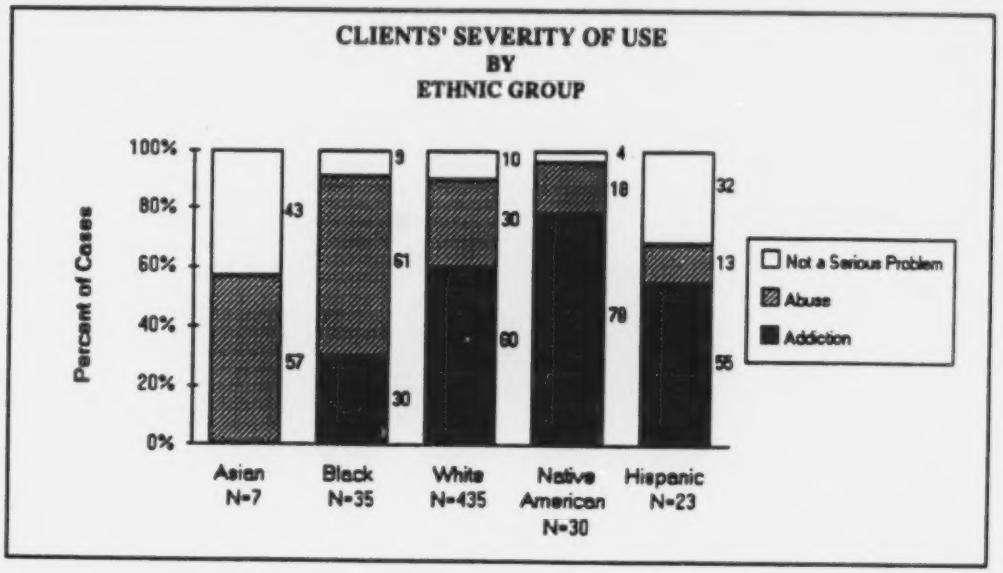
Graph 19 compares the socio-demographic characteristics of clients assessed at the three severity of use levels.



Main Points:

- Adolescents over 15 were more likely to have been assessed as addicted (72%) than adolescents aged 15 or under.
- No significant differences were found in severity of use by sex.
- Minority clients were less likely to have been assessed as addicted than non-minority clients.
- Eastern Washington clients were significantly more likely to have been assessed as addicted than clients from Western Washington.
- Persons assessed as addicted had a significantly larger proportion of high school dropouts (26%) than clients assessed as abusers (14%) or as not having a serious drug or alcohol problem (11%).
- Clients from single or no parent households comprised a large proportion of those assessed as addicted (68%) and a significantly smaller proportion of those assessed as not having a serious drug or alcohol problem (51%).

Graph 20 illustrates clients' severity of use at assessment by ethnic group.



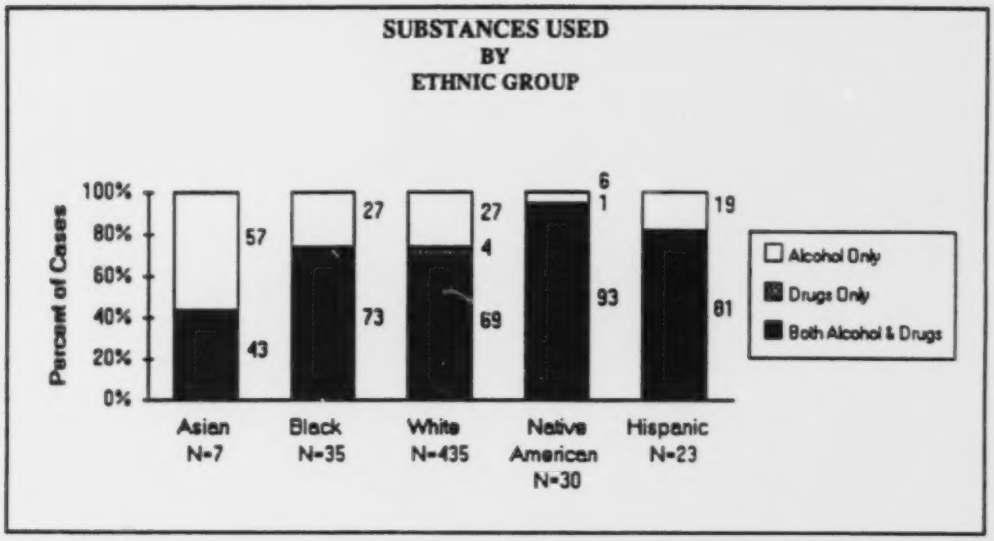
Main Points:

- The highest rate of addiction among those assessed was found among Native American clients (78%). This observation may be due in part to the existence of Indian Health Service outpatient programs which serve Native Americans with less serious drug/alcohol problems, leaving the more serious cases to be served by the DASA system.

- No Asian clients were assessed as addicted, and Asians were the most likely to be assessed as not having a serious drug or alcohol problem (43%). The small number of Asians in the sample prevents generalizations.

- Blacks (61%) and Asians (57%) had the largest proportion assessed as abusing drugs and/or alcohol.

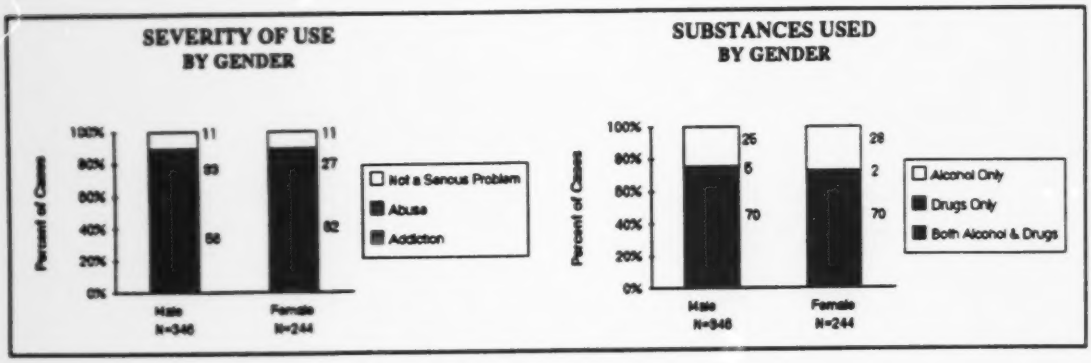
Graph 21 illustrates the proportion of each ethnic group using alcohol only, drugs only, and both alcohol and drugs.



Main Points:

- Native American clients were most apt to report using both alcohol and drugs (93%).
- Asian clients were the least likely to report using both alcohol and drugs (43%), and the most likely to report using alcohol only (57%).
- Only a small percent of all clients reported using drugs alone. All of these clients were either Whites (4%) or Native Americans (1%).

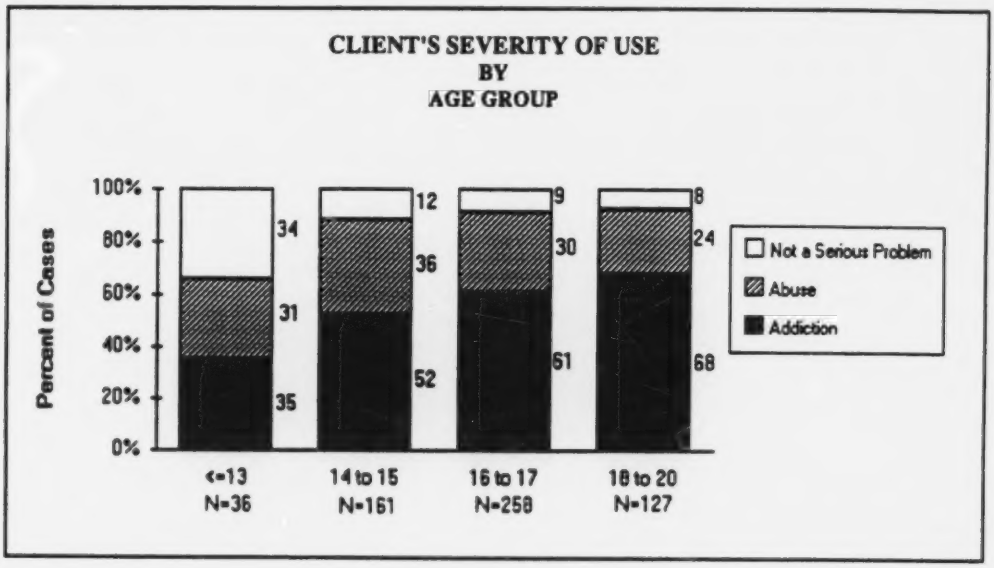
Graph 22 illustrates severity of use and substances used by gender.



Main Points:

- There is no significant difference in severity of use by gender.
- There is no significant difference in types of substances used by gender.

Graph 23 shows the relationship between age and severity of use.

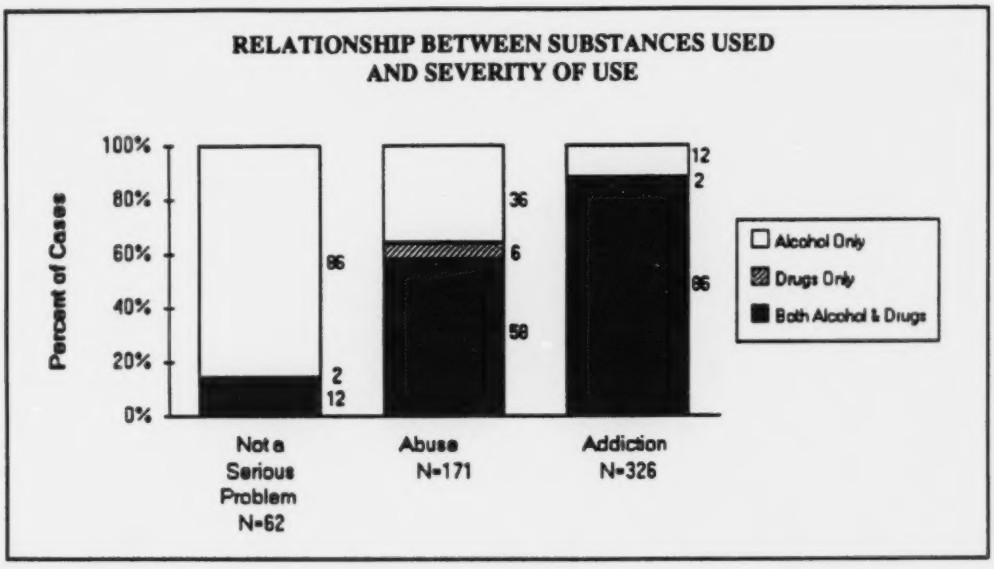


Main Points:

- Among adolescents assessed for treatment, those in the youngest age group (<=13) had the smallest proportion (35%) of addicted clients and the largest proportion (34%) of clients with no serious drug or alcohol problems.

- The proportion of those addicted increases with age group. In the 13 or younger age group 35% of those assessed were addicted compared to 52%, 61% and 68% of the 14-15, 16-17 and 18-20 age groups, respectively.

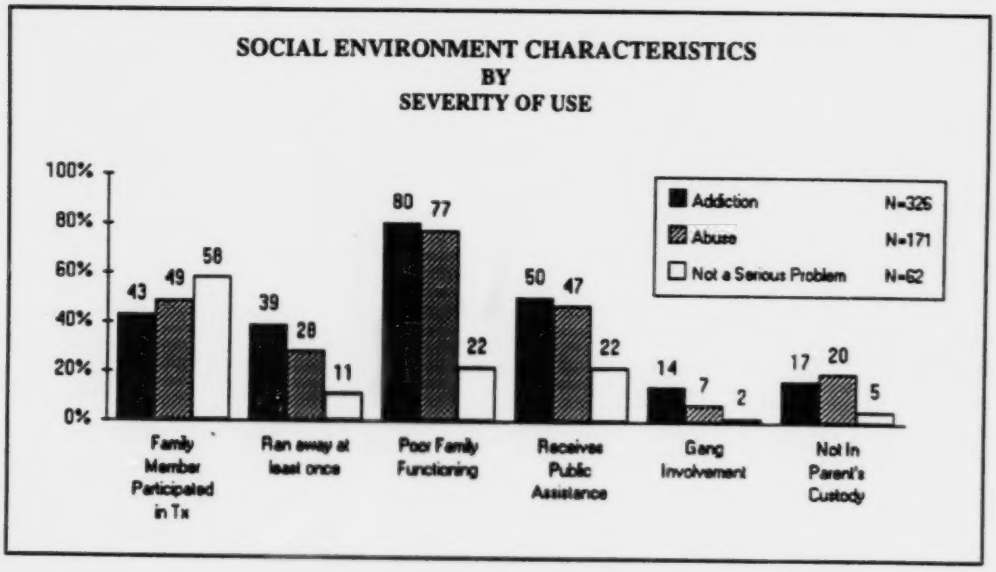
Graph 24 shows the relationship between severity of use and substances used among adolescent clients.



Main Points:

- The proportion of clients using alcohol and drugs together increases significantly with severity level.
- The use of alcohol only is inversely related to severity level: 86% of those assessed as not having a serious problem reported using just alcohol compared to 36% of abusers and 12% of addicted clients.
- 6% of abusers reported using only drugs as compared to 2% of addicted clients and 2% of clients assessed as not having a serious problem.

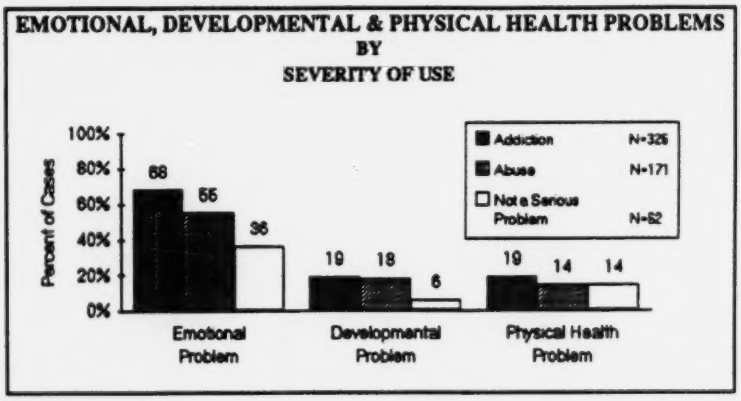
Graph 25 presents data on the social environment of clients by severity of use.



Main Points:

- The percent reporting that a family member participated in their treatment was significantly greater among those without a serious drug/alcohol problem than among those assessed as addicted.
- The proportion that has run away increases significantly with severity level.
- Only 22% of clients not having a serious alcohol or drug problem reported poor family functioning compared to 77% of abusers and 80% of the addicted.
- The proportion of clients receiving public assistance is significantly higher among those assessed as abusing or addicted than among those without a serious drug/alcohol problem.
- Clients assessed as addicted were significantly more likely to have been involved with gangs than other clients.
- 20% of clients assessed as abusing and 17% of those assessed as addicted reported not being under their parent's custody compared to only 5% of those assessed as not having a serious problem.

Graph 26 compares the presence of emotional problems, developmental impairments, and physical health conditions among clients assessed at the three severity levels.



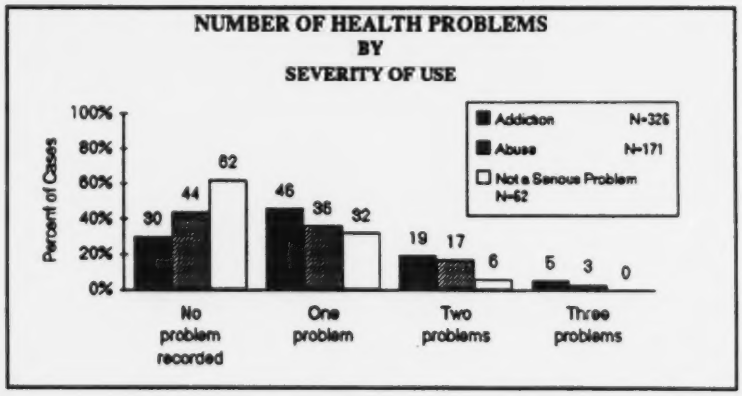
Main Points:

- Emotional problems were most frequently reported: 68% of addicted clients, 55% of abusers and 36% of those not having a serious drug or alcohol problem reported having emotional problems. These differences are significant.

- The proportion of clients with a developmental impairment was significantly lower among clients assessed as not having a serious drug or alcohol problem (6%) than among clients assessed as abusing (18%) or addicted (19%).

- The difference in the proportion of clients who had a physical health problem across severity levels was not significant.

Graph 27 shows the number of health problems reported by clients by severity of use.



Main Point:

- A larger percent of clients assessed as addicted reported having one, two or three health problems than clients assessed as abusing or not having a serious drug/alcohol problem.

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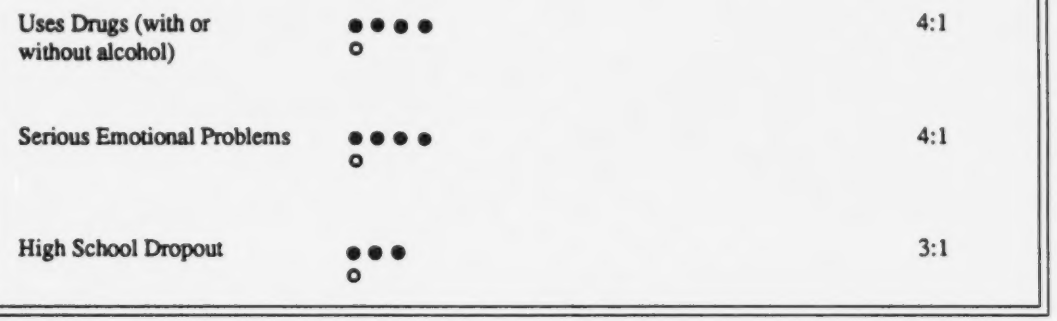
PREDICTING ADDICTION

Variables included in a multiple regression analysis to identify predictors of whether or not a client was assessed as addicted included:

- uses drugs (with or without alcohol) *
- had serious emotional problems *
- high school dropout *
- not in need of additional public assistance or social services
- Eastern Washington residence
- age 15 or less
- minority status
- from a single or no parent household
- family or client received public assistance
- reported poor family functioning
- had serious developmental problems
- was involved with the courts
- female
- ran away at least once

The three variables denoted by an asterisk (*) continued to be significant at the $P_{0.05}$ level with all the variables listed above included in the equation.

ODDS-RATIOS OF BEING ASSESSED AS ADDICTED



Main Points:

- Clients who reported using drugs (either with or without alcohol) were 4 times as likely to have been assessed as addicted as clients who reported using alcohol only.
- Clients with serious emotional problems were 4 times as likely to be assessed as addicted as clients with no serious emotional problems.
- Clients who were high school dropouts were 3 times as likely to be assessed as addicted as clients still in school.

SUMMARY

This chapter compared clients assessed as not having a serious drug or alcohol problem with those assessed as abusing or addicted. It also examined the substances used by these clients. 70% of the clients assessed reported using both alcohol and drugs, and 58% were assessed as addicted. Addicted clients tended to: be older, have more emotional and developmental problems, and use both alcohol and drugs. They consisted of larger proportion of clients who: were from Eastern Washington, were in need of public assistance or social services, had run away, reported poor family functioning, and were from a single or no parent household . Predictors of addiction among DASA clients included: using drugs (with or without alcohol), having serious emotional problems, and dropping out of high school.

CHAPTER 5: COURT INVOLVEMENT

Less than half (44%) of adolescents who entered treatment were involved with the court system at the time of their assessment. Some 22% were first time offenders involved in a court diverted case. These adolescents were given the option of being sent to juvenile detention or jail, or of entering drug/alcohol treatment. The remaining 22% of clients were repeat offenders or more serious offenders involved with the courts through probation, parole, aftercare, or informal contact.

This chapter looks at two groups of adolescents:

- **Clients Involved with the Court System, and**
- **Clients NOT Involved in the Court System.**

These two groups are compared in terms of socio-demographic characteristics, program placement, substance use, social environment, and completion rates.

Court involved clients were identified as adolescents who were: referred into treatment by juvenile authorities, involved in a court diverted case, or reported juvenile justice involvement at the time of assessment.

MAJOR FINDINGS

Socio-Demographic Characteristics

Males and high school dropouts comprised a significantly larger proportion of clients involved with the courts than of clients not involved with the courts.

Program Placement

Court involved clients had a significantly larger proportion assigned to inpatient treatment (25%) than clients not involved with the courts (15%).

Substance Use

Adolescent clients involved with the courts have similar substance abuse problems to those of other clients.

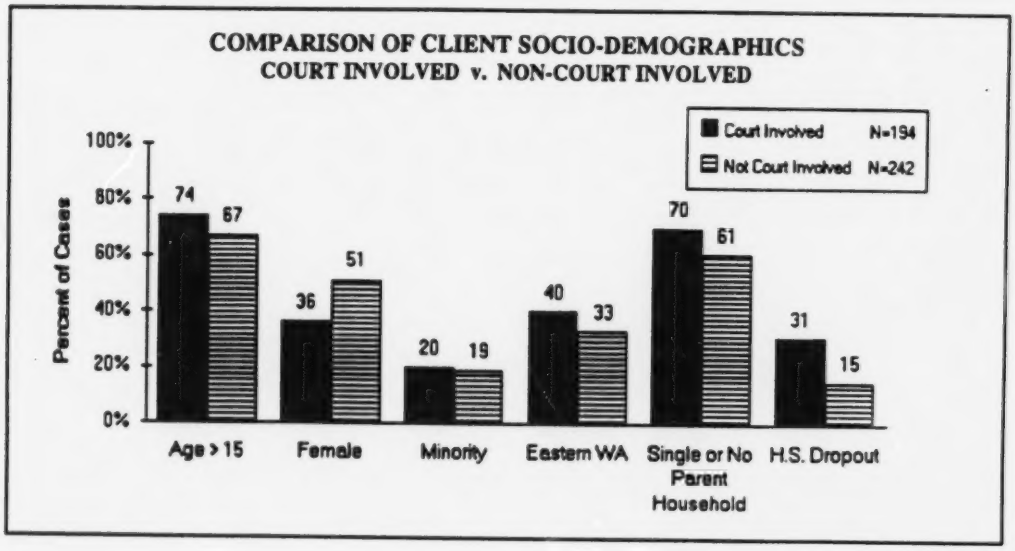
Treatment Completion

Clients involved with the courts were significantly more likely to complete their treatment plan (42%) than other clients (29%).

Social Environment

Clients involved with the courts were significantly more likely to have run away, be involved with gangs, report poor family functioning, and to be on public assistance.

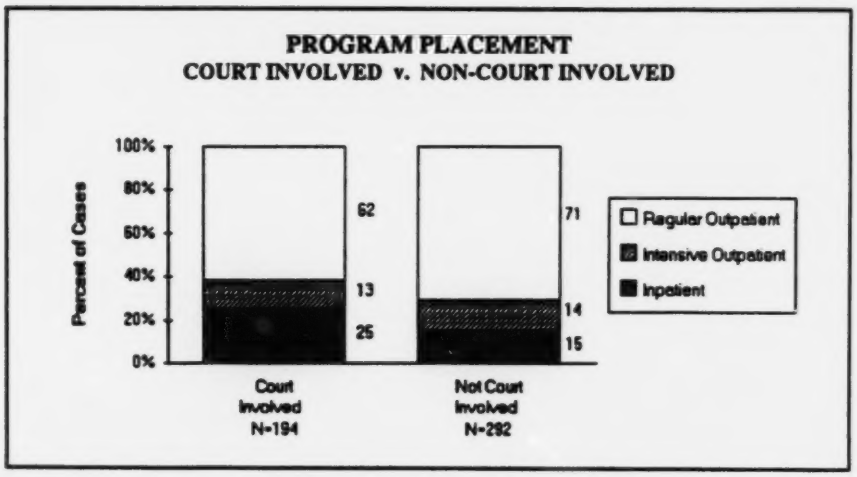
Graph 28 compares the socio-demographic characteristics of clients who entered treatment through court involvement and those that entered through other arrangements.



Main Points:

- The proportion of court involved clients that are female (36%) is significantly lower than the proportion of non-court involved clients that are female (51%).
- 31% of court involved clients were high school dropouts compared to only 15% of non-court involved clients.
- No significant difference was found between court involved and non-court involved clients in terms of being from a single or no parent household, Eastern Washington residence, age, or minority status.

Graph 29 shows the program placement of court involved and non-court involved clients.

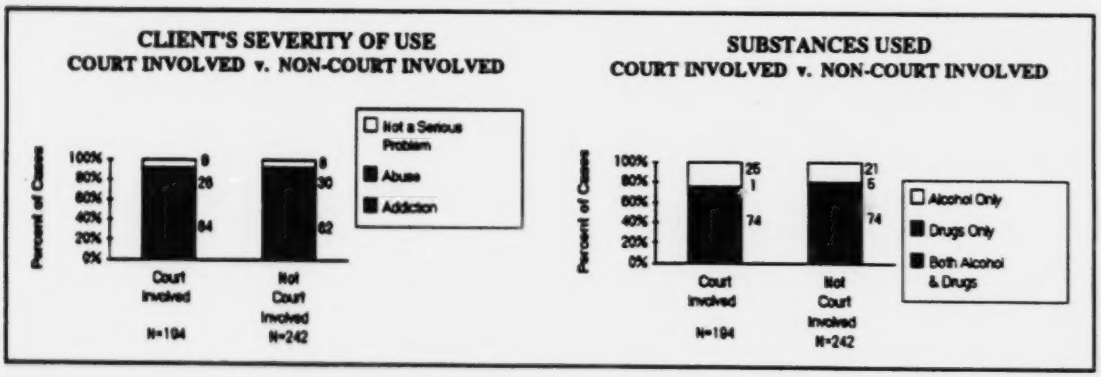


Main Points:

- Court involved clients were significantly more likely to be placed in inpatient treatment and less likely to be placed in regular outpatient treatment than non-court involved clients. 25% of court involved clients were assigned to inpatient treatment compared to only 15% of non-court involved clients.

- The proportion assigned to intensive outpatient was similar between the two groups.

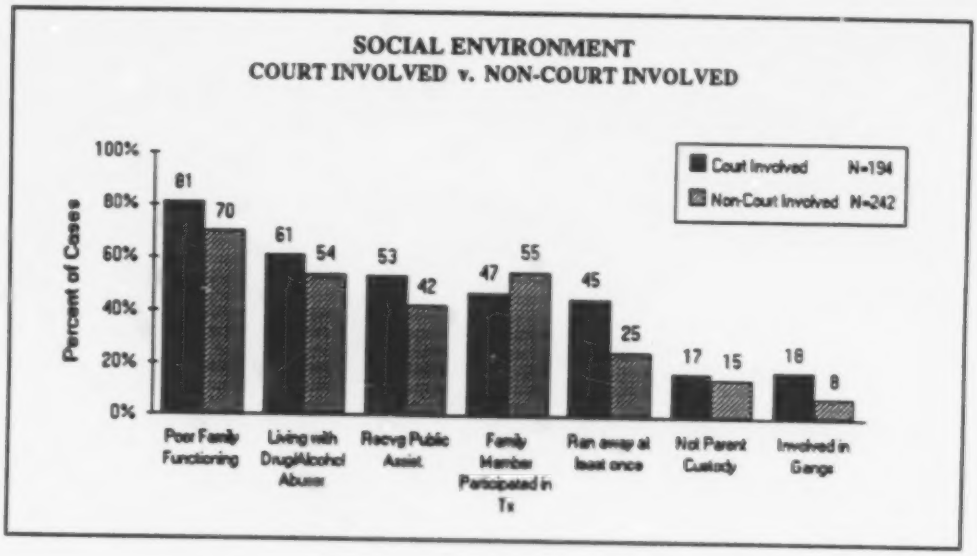
Graph 30 shows the severity levels and substances used by clients involved with the courts compared to the use of those not involved with the courts.



Main Point:

- Clients involved with the courts had similar severity levels and substance use to clients not involved with the courts.

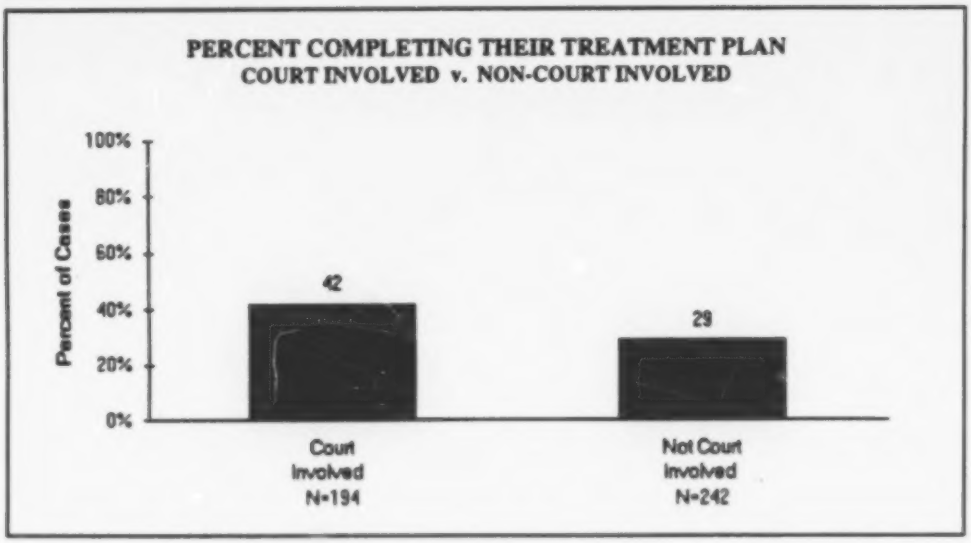
Graph 31 compares the social environment of clients involved with the courts and those not involved with the courts.



Main Points:

- The percent of court involved clients that had a family member participate in their treatment (47%) was significantly lower than that of non-court involved clients (55%).
- 45% of court involved clients ran away at least once, compared to only 25% of clients not involved with the courts.
- Participation in gangs was over twice as high (18%) for court involved clients as it was for non-court involved clients (8%).
- 53% of court involved clients reported that they or their families received public assistance compared to 42% of clients not involved with the courts. This difference is significant.
- No significant difference was found between clients involved with the courts and clients not involved with courts, in terms of family functioning, living with a drug or alcohol abuser, or being in the custody of parents.

Graph 32 shows the proportion of court involved and non-court involved clients who completed their treatment plan.



Main Point:

• 42% of court involved clients completed treatment compared to 29% of non-court involved clients. This difference is significant. Court involved clients completed treatment at higher rates in all three modalities (See Table 9 in Appendix A).

SUMMARY

This chapter compared court involved clients, representing 44% of the clients entering treatment, to non-court involved clients, representing 56%. Court involved clients had a larger proportion who: were males (64%), reported poor family functioning (80%), received public assistance (53%), had run away at least once (45%), had dropped out of high shcool (31%) and were involved with gangs (18%), than clients not involved with the courts. They were also more likely to be placed in inpatient treatment, and to have completed their treatment plan than clients who were not involved with the courts.

CHAPTER 6: GEOGRAPHIC RESIDENCE

Adolescents receiving DASA-funded services come from all over the state. This chapter looks at clients from:

- **Eastern Washington**
- **Western Washington**

The dividing line for this classification is represented by the Cascade Mountains (See Appendix E).

Clients from these areas are compared in terms of program placement, socio-demographics, substance use, referral sources, percent receiving services within their catchment area, and social environment. Catchment area is defined by the first three digits of the client's zip code. There are ten catchment areas in the state.

In addition, data on the number of clients assessed and their severity levels are presented by DSHS region. Data on the number served by county can be found in Appendix E.

68% of the clients in the sample were from Western Washington, 32% from Eastern Washington. This is similar to the distribution of adolescents in the state between the two regions, where 66% are from Western Washington and 34% from Eastern Washington.

MAJOR FINDINGS

Socio-Demographics

Clients from Western Washington were significantly more likely to be minority clients. There were no Black or Asian clients from Eastern Washington.

Substance Use

Clients from Eastern Washington had higher rates of addiction and abuse and were less likely to have been assessed as not having a serious drug or alcohol problem.

Of the six DSHS regions, Region 2, the southeast region, had the largest percent of addicted clients.

Program Placement

Clients from Eastern Washington made up a larger proportion of inpatient clients.

Referrals

Eastern Washington clients were more likely to have been referred into treatment by juvenile authorities and less likely to be referred by their families than Western Washington clients.

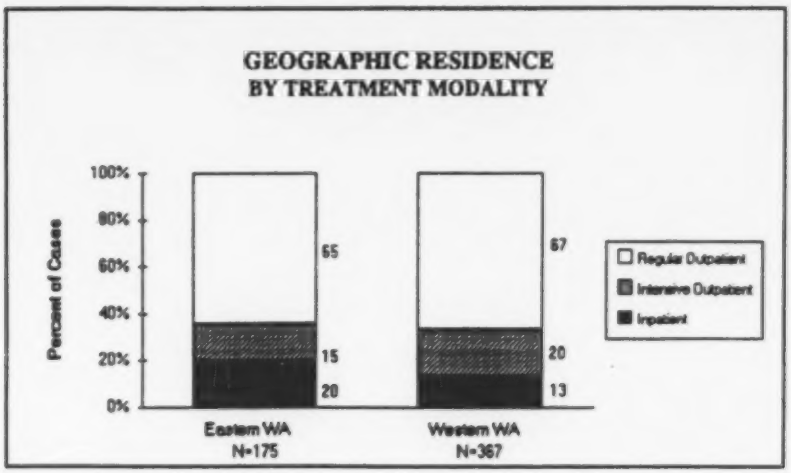
Social Environment

Not living under parent's custody, family member participation in treatment, and gang involvement were significantly more common among Western Washington clients than among Eastern Washington clients.

Receiving Services Within Catchment Area

Eastern Washington clients were significantly more likely to receive inpatient and regular outpatient services within their broadly defined catchment area than Western Washington clients.

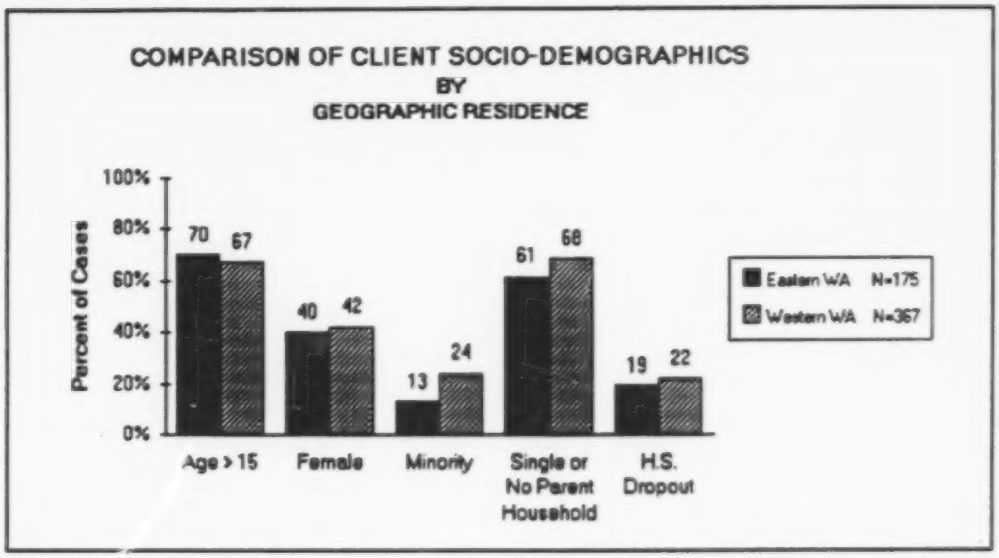
Graph 33 shows clients' geographic residence by treatment modality.



Main Points:

- The majority of clients (about two-thirds) from both regions were placed in regular outpatient treatment.
- 20% of the clients from Eastern Washington were assigned to inpatient treatment compared to only 13% of Western Washington clients. This difference is significant.
- No significant difference was found in the proportion of clients from Eastern or Western Washington who were assigned to regular or intensive outpatient treatment.

Graph 34 compares the socio-demographic characteristics of clients who reside in Eastern and Western Washington.

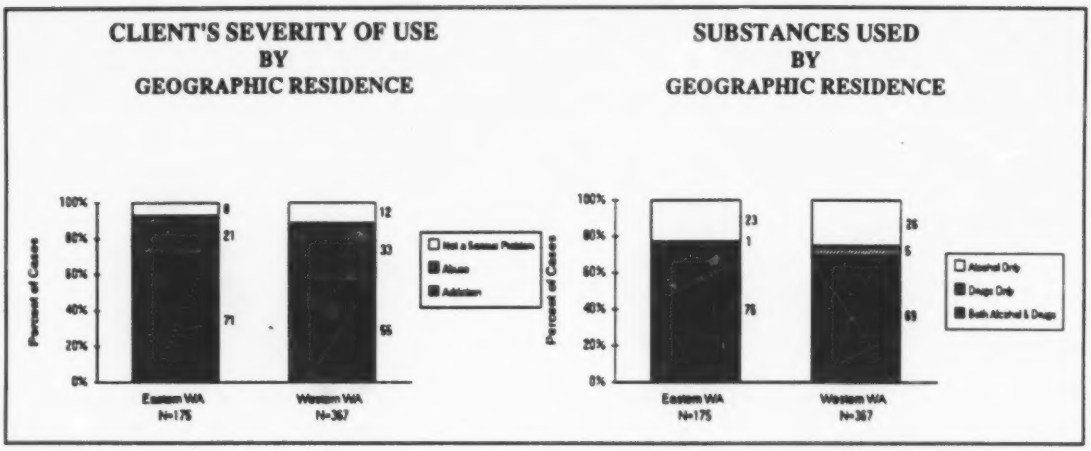


Main Points:

- 24% of the clients from Western Washington were of minority status compared to only 13% of clients from Eastern Washington.

- There was no significant difference in the proportion of clients from Eastern and Western Washington in terms of age, sex, single or no parent households, or high school dropouts.

Graph 35 shows the severity levels and substances used by clients residing in Eastern and Western Washington.

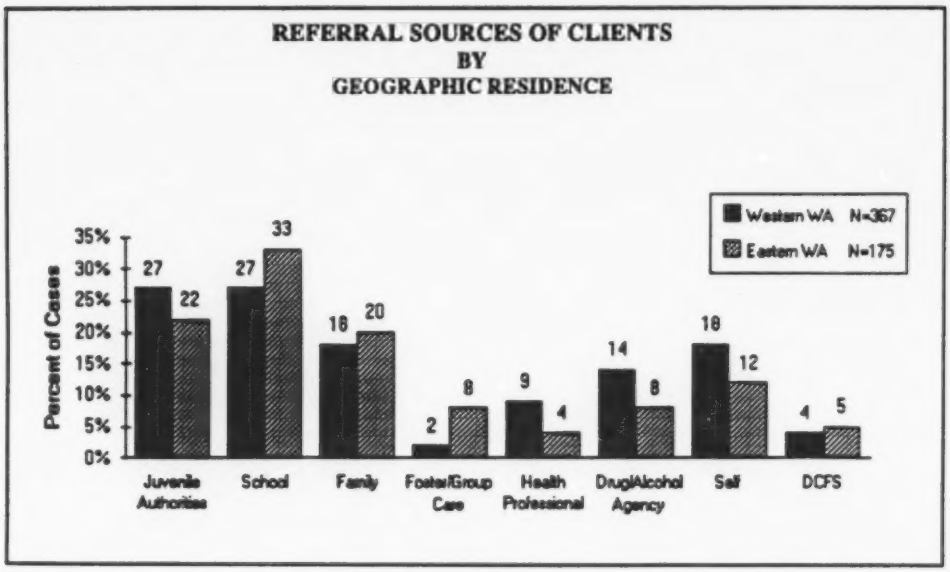


Main Points:

- Clients from Eastern Washington were more likely to have been assessed as addicted (71%) than clients from Western Washington (55%).

- 76% of clients from Eastern Washington reported using both drugs and alcohol compared to 69% of clients from Western Washington. This difference is significant.

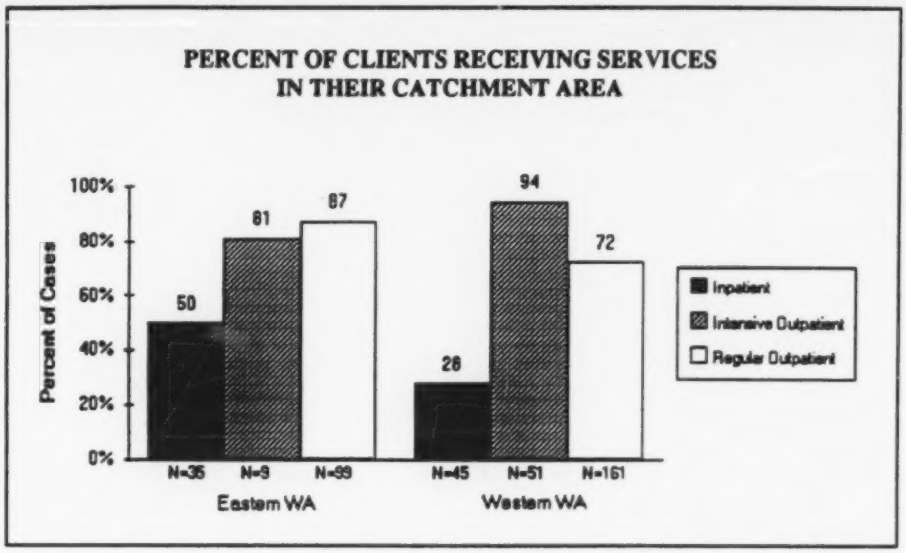
Graph 36 shows referral sources for clients from Eastern and Western Washington.



Main Points:

- Schools were the most frequently reported referral source for Western Washington clients (33%).
- Clients from Eastern Washington reported being referred into treatment most often by juvenile authorities (27%) and schools (27%).
- Western Washington clients were more likely to report being referred into treatment by a drug/alcohol treatment center, or self referred, and less likely to have been referred by a health professional than Eastern Washington clients.

Graph 37 shows the proportion of clients from Eastern and Western Washington that received treatment in the same area where they lived. A map of these areas, defined by the first three digits of the client's zip code, and a map of agency locations can be found in Appendices E and C, respectively. There are ten of these catchment areas in the state.



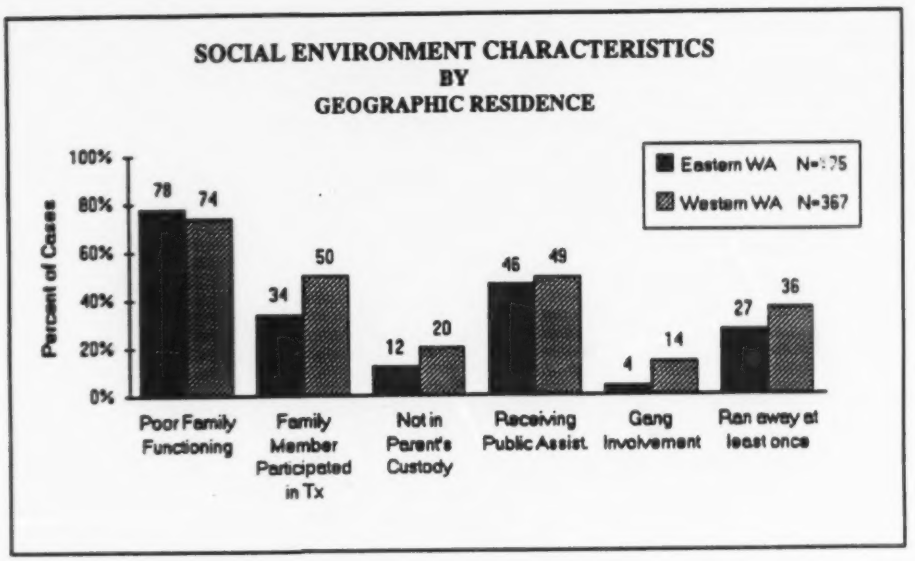
Main Points:

- Clients from both Eastern and Western Washington were significantly more likely to have received outpatient services within their catchment area than inpatient services.

- Clients from Eastern Washington were significantly more likely to have received inpatient services and regular outpatient services from within their catchment area than clients from Western Washington. The relatively larger size of catchment areas in Eastern Washington may partially account for this observation.

- No significant difference was found in the proportion of Eastern Washington clients and Western Washington clients who received intensive outpatient services within their catchment area.

Graph 38 presents the social environment of clients from Eastern and Western Washington.



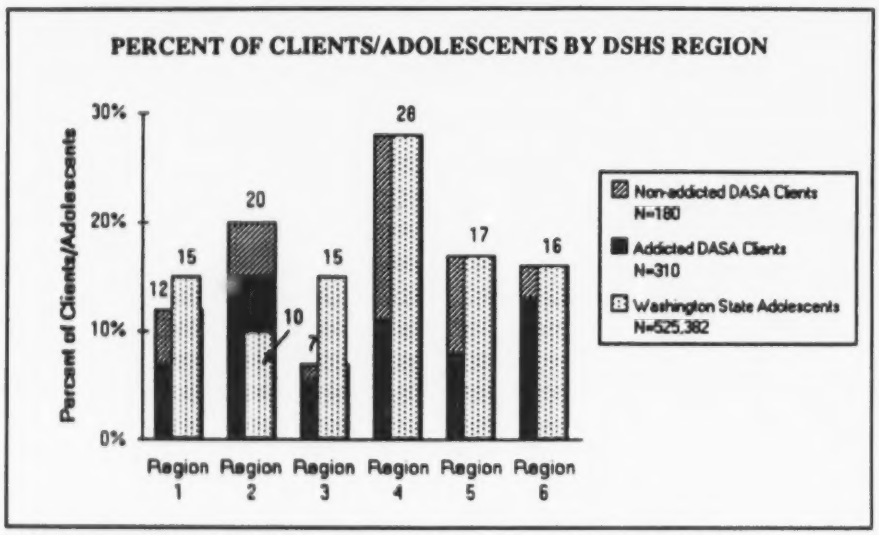
Main Points:

- Clients from Western Washington were significantly more likely to report family member participation in treatment, not being under parent's custody, and being involved with gangs, than clients from Eastern Washington.

- No significant difference between Eastern and Western Washington clients was found in terms of the proportion reporting poor family functioning, use of public assistance and running away.

Graph 39 shows the percent of the total state adolescent population living in each DSHS region, along with the percent of all clients assessed as addicted and of those assessed as not addicted.

Region 1: Adams, Chelan, Douglas, Ferry, Grant, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, and Whitman Counties.
Region 2: Asotin, Benton, Columbia, Franklin, Garfield, Kittitas, Walla Walla, and Yakima Counties.
Region 3: Island, San Juan, Skagit, Snohomish, and Whatcom Counties.
Region 4: King County.
Region 5: Kitsap and Pierce Counties.
Region 6: Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Klickitat, Lewis, Mason, Pacific, Skamania, Thurston, and Wahkiakum Counties.



NOTE: Population of Washington State adolescents for persons aged 13-19 is from the 1990 Census.

Main Points:

- Region 4 had the largest percent of clients in the sample (28%) while Region 3 had the smallest percent of clients (7%).
- Regions 2 and 6 had the largest percent of clients in the state assessed as addicted.
- Regions 3 and 6 had the largest percent of clients from their regions assessed as addicted.
- Regions 1 and 3 had fewer clients assessed for treatment relative to their respective total adolescent populations than other regions.
- While Region 2 is home to only 10% of the adolescents in the state, it accounts for 20% of all the DASA assessments.

SUMMARY

This chapter examined differences in the characteristics and placement of clients from Eastern and Western Washington. Clients from Eastern Washington were significantly more likely to receive inpatient and regular outpatient treatment within their "catchment" area than clients from Western Washington. Western Washington clients differed from Eastern Washington clients in that they tended to be composed of more: minorities, clients not under their parent's custody, and clients involved with gangs. They were also more likely to have had a family member participate in their treatment, and to have been referred by their schools.

CHAPTER 7: PERSONAL EXPERIENCE INVENTORY (PEI)

The Personal Experience Inventory (PEI) is a sophisticated self-report substance abuse assessment instrument specifically designed for use with adolescents. It was developed in Minnesota by the Chemical Dependency Adolescent Assessment Project. In 1990, DASA policy required that the PEI be completed by all DASA clients. This policy has since been changed. Because the policy was short-lived, a record of PEI administration was not always found in the files. PEI's may have been archived elsewhere, or may not have been administered. Consequently a record of PEI use was found in only 55% of the sample clients' files, and a match with PEI data was found for only 45% of the clients.

Not all the PEI's were analyzed. A large number (42%) had a negative PEI internal validity flag indicating that the questionnaire may not have been filled out correctly. This flag identifies clients who may have responded randomly or faked "good" or "bad" responses. Minorities and IV drug users were more heavily represented among clients with an invalid PEI than among clients with a valid PEI. Valid data from the PEI is available for 156 clients, about 26% of those in the sample.

This chapter presents data on the ethnic and gender composition of clients for whom valid PEI's were available, their geographic residence, and the treatment modality to which they were assigned. Also presented are PEI screen results, summary scale scores, an inventory of substances used, and a discussion of some findings from both the PEI and the client descriptive survey.

Clients in the sample with a valid PEI were similar to other clients except that they were more likely to have been referred into treatment by juvenile authorities, assessed as addicted, and to have completed their treatment plan.

MAJOR FINDINGS

Demographics

PEI's were equally available for clients by gender, minority status, and geographic residence.

Summary Scale

In terms of mean percentile scores for the PEI's Basic Chemical Involvement Problem Severity Scales, this sample as a whole was close to the norms established for drug clinic clients. Females tended to have slightly more problematic scores than males, and minorities slightly more than non-minorities.

PEI Screen Results

Women had more positive (i.e., problematic) sex abuse (66%), physical abuse (49%), psychiatric referral (48%), and suicide (46%) screens than men, indicating a higher incidence of these problems.

36% of the women had a positive eating disorder screen. No figures are available for men.

40% of this PEI sample appear to be at high risk for suicide.

66% of this sample had a positive family history of chemical dependency screen.

Substances Used as Reported in the PEI

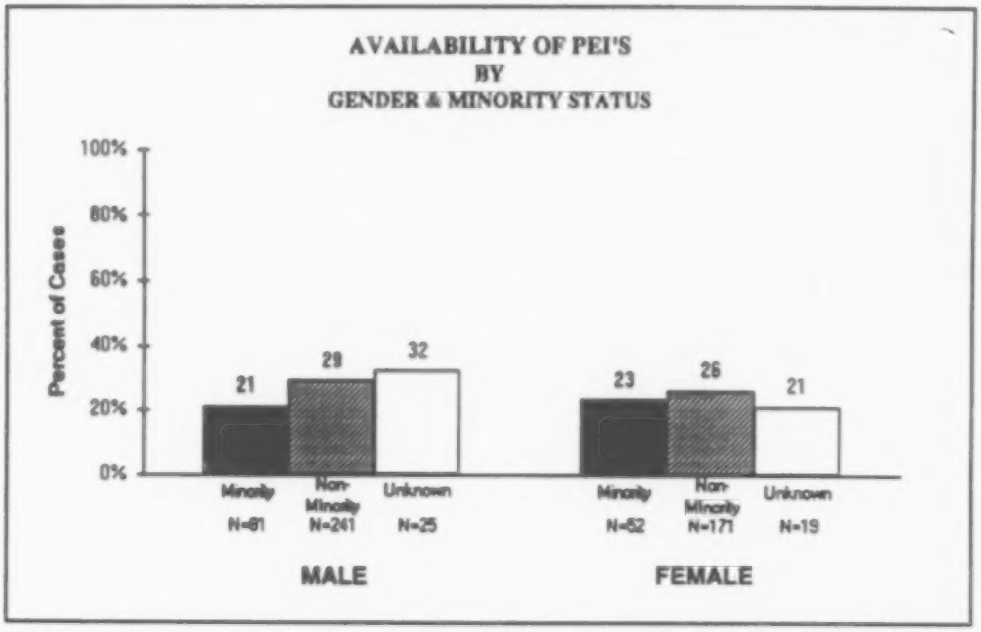
In the 3 months prior to assessment, 81% of the clients with a PEI available reported using alcohol, 65% reported using marijuana and 19% reported using LSD, cocaine and amphetamines, respectively. The percentages of clients using these and other drugs over the past three months, twelve months, and over a lifetime are presented in Table 4.

Client Descriptive Data & PEI Results

Inpatient clients were the most likely to be assessed as addicted and to have had a positive psychiatric referral screen. A positive psychiatric screen suggests the need for psychiatric assessment and treatment.

There was no significant difference in the proportion of clients with a positive (ie. problematic) sexual abuse screen across the three drug use severity levels.

Graph 40 shows the percent of clients, by gender and minority status, included in the PEI analysis.

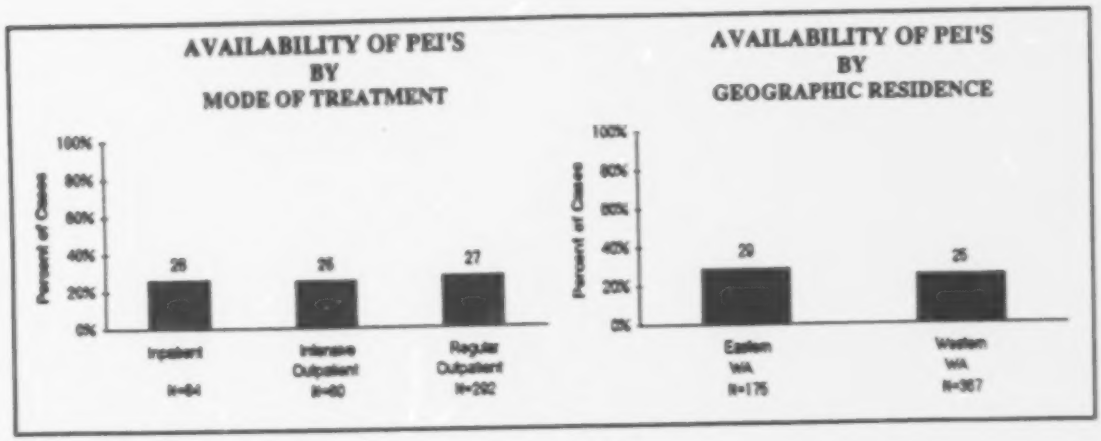


NOTE: "Unknown" bars refer to the percent of those clients whose minority status was not known.

Main Point:

- There is no significant difference in the availability of the PEI among clients by gender or minority status.

Graph 41 shows the treatment modality that clients who had a PEI available were assigned to, and their geographic residence.



Main Points:

- There is no significant difference in the proportion of clients from inpatient, intensive outpatient, and regular outpatient treatment modalities who had a PEI available for analysis.

- There is no significant difference in the geographic residence of clients who had a PEI available for analysis.

Table 2 presents summary scales showing how the PEI sub-sample (broken down by gender and minority status), compares to a normative sample consisting of similarly aged adolescents in drug treatment clinics across the nation.

Presented below are mean percentile scores. A percentile score of 50% tells us that the mean score in our sample was the same as the mean score in the normative group. A score of less than 50% means that our sample group scored lower and has less of a problem in this area than the normative group. Likewise, a score of more than 50 indicates that our sample scored higher and may have more of a problem in that area than the normative group.

TABLE 2. MEAN PERCENTILE SCORES - PEI CLINICAL/SUMMARY SCALES

BASIC SCALES: CHEMICAL INVOLVEMENT PROBLEM SEVERITY SCALES	MALE				FEMALE				TOTAL
	NON-MIN N=70	MIN N=17	UNK N=8	TOTAL N=95	NON-MIN N=48	MIN N=12	UNK N=4	TOTAL N=61	N=156
	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$
Personal Involvement w/Chemicals	48	52	46	49	50	57	51	52	50
Effects from Drug Use	49	56	46	51	53	55	45	54	51
Social Benefits of Drug Use	48	53	46	49	50	51	54	51	49
Personal Consequences of Drug Use	49	56	47	51	51	57	50	52	51
Polydrug Use	48	50	46	49	51	54	50	51	49

NOTES:

NON-MIN = Non-minority
MIN = Minority
UNK = Unknown

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The scales presented can be described as follows:

Personal Involvement	- a global measure of problems associated with drug involvement
Effects of Drug Use	- measures immediate adverse psychological, physiological and behavioral effects of chemical use.
Social Benefits	- measures drug use associated with increased social confidence, peer acceptance and interpersonal skills.
Personal Consequences	- focuses on personal problems resulting from drug use including difficulties with friends, parents, school and other social institutions.
Polydrug Use	- measures use of drugs other than alcohol or nicotine.

Main Points:

- Adolescents in this sub-sample (i.e. those with PEIs available) scored similarly to the adolescent drug clinic norm. In the aggregate, this group diverged by less than 1% from the national norm.

- By gender, females were significantly more likely to be polydrug users than males (See Table 11A in Appendix A for details).

- Minorities had significantly higher scores than non-minorities on the personal involvement, effects of use, and personal consequences scales. Higher scores indicate more of a problem in these areas (See Table 11B in Appendix A for details).

- Minority males had significantly higher scores on the effects of drug use scale than non-minority males, while minority females had significantly higher scores on the personal involvement and personal consequences scales than non-minority females or males.

Table 3 identifies other problems clients face, as noted by a positive PEI screen.

TABLE 3. POSITIVE PEI SCREENS

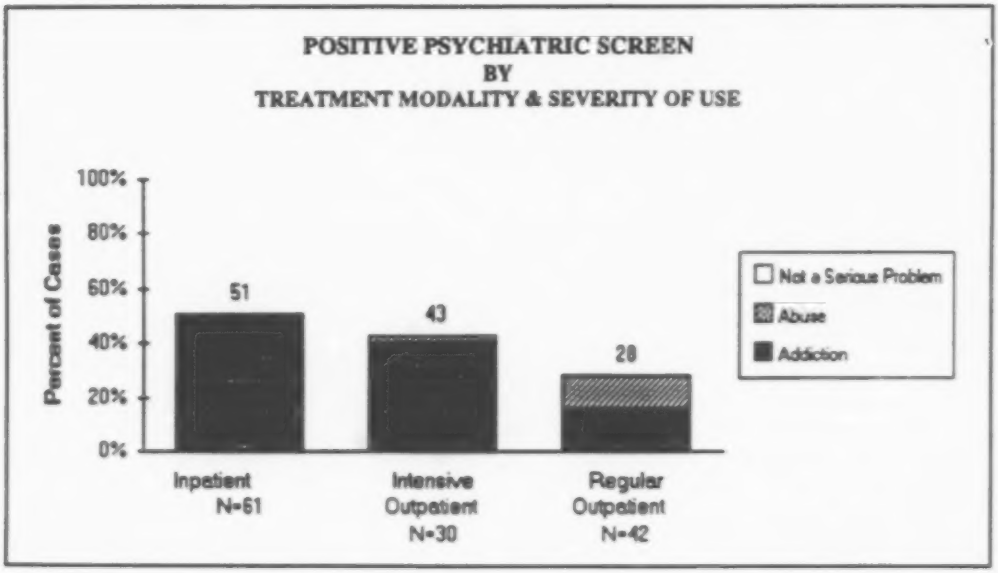
PEI SCREENS	MALE				FEMALE				TOTAL N=156
	NON N=70	MIN N=17	UNK N=8	TOTAL N=95	NON N=45	MIN N=12	UNK N=4	TOTAL N=61	
	%	%	%	%	%	%	%	%	%
Psychiatric Referral	27	71	25	35	49	42	50	48	40
Eating Disorder	NA	NA	NA	NA	42	25	0	36	NA
Sexual Abuse Victim	33	29	38	33	67	58	75	66	46
Physical Abuse Victim	21	29	38	24	51	50	25	49	34
Family Drug Dependency History	70	76	50	69	56	83	50	61	66
Suicide Potential	33	47	38	38	49	42	25	46	40

NOTES: NA= Not Applicable. The PEI does not collect eating disorder information on men.
Other abbreviations same as in Table 2.

Main Points:

- 40% of the sample are in need of psychiatric referral, as determined by the PEI.
- 36% of the female clients had a positive eating disorder screen.
- 59% of minorities had a positive psychiatric referral screen compared to only 36% of non-minorities. This difference was found to be significant.
- 46% of this sample were sexually abused. Females reported a significantly higher rate of sexual abuse, 66%, versus 33% for males.
- 34% of this sample were physically abused; 49% of females and 24% of males. This difference was found to be significant.
- 66% had a chemically dependent person in his or her family.
- 40% of this sample had a positive suicide potential screen (i.e., were at high risk for suicide).

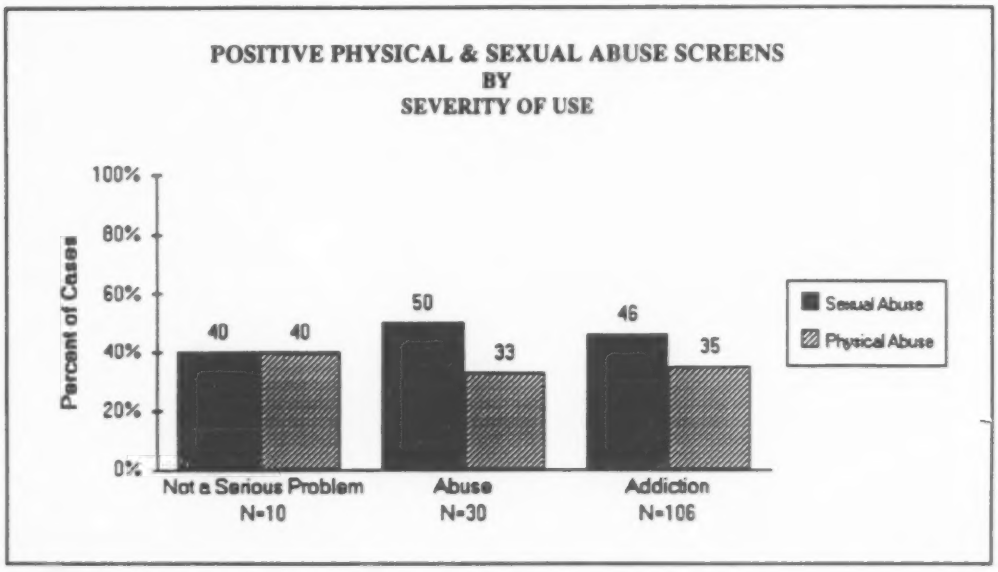
Graph 42 shows the treatment modality and severity of use of clients with a positive psychiatric screen.



Main Points:

- 51% of inpatient, 43% of intensive outpatient and 28% of regular outpatient clients had a positive psychiatric screen.
- The majority of clients with a positive psychiatric screen were assessed as addicted. This was true across all three treatment modalities.
- None of the adolescents with a positive psychiatric screen were assessed as not having a serious alcohol or drug problem.

Graph 43 shows the proportion of clients with a positive sexual abuse screen and the proportion with a positive physical abuse screen by severity of use.



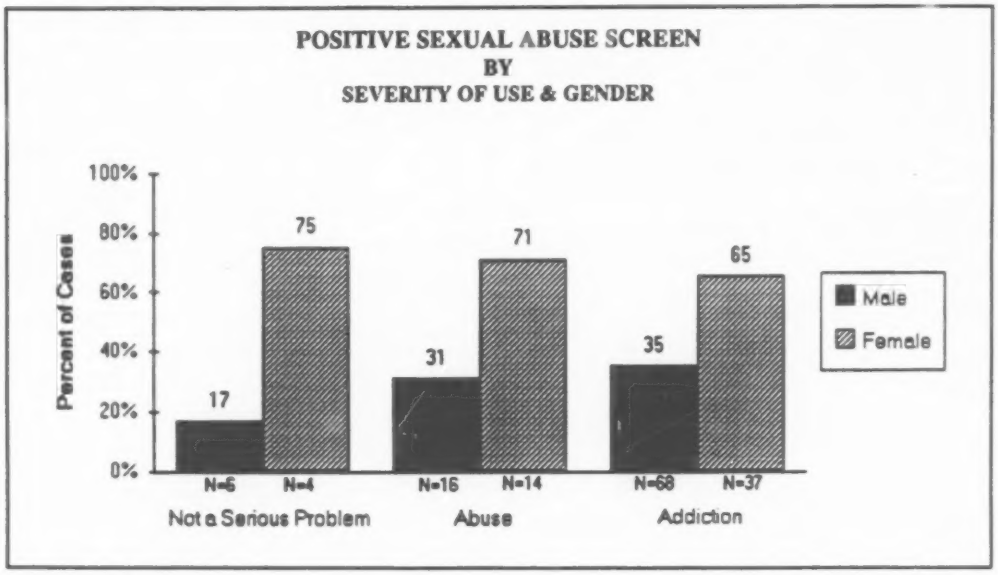
Main Points:

- A positive sexual abuse screen was more common than a positive physical abuse screen among those assessed as abusing or addicted. Both screens were equally as common among those assessed as not having a serious drug or alcohol problem. The difference between the proportion of adicted or abusing clients with a positive sexual abuse screen and those with a positive physical abuse screen was found to be significant.

- Neither a positive sexual abuse screen nor a positive physical abuse screen was positively related to severity of use.

- Most (85%) of the clients with a positive physical abuse screen also had a positive sexual abuse screen. 62% of the clients with a positive sexual abuse screen also had a positive physical abuse screen.

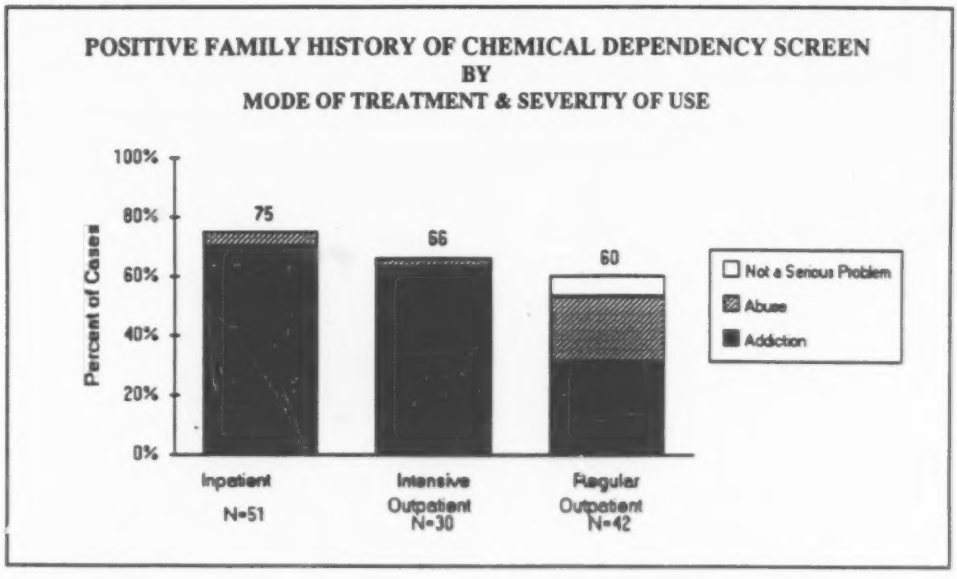
Graph 44 shows the percent of males and females at each severity level with a positive sexual abuse screen.



Main Points:

- A much larger proportion of females than males across all severity levels had a positive sexual abuse screen.
- There is no significant increase in the proportion of males, or females, with a positive sexual abuse screen across severity levels. This may be due to the small number of clients with a positive sexual abuse screen who were assessed as not having a serious problem.

Graph 45 shows the proportion of clients with a positive Family History of chemical dependency screen by treatment modality.



Main Points:

- The proportion of clients with a positive family history of chemical dependency increases with more intensive treatment modalities: 60% of regular outpatient clients, 66% of intensive outpatient clients, and 75% of inpatient clients. The difference between regular outpatient and inpatient treatment is significant.

- The majority of clients with a positive family history of chemical dependency were assessed as addicted. This was true across all three treatment modalities, with inpatient and intensive outpatient modalities having over 95% with a positive family history screen.

- Only in regular outpatient treatment were there any clients with a PEI and a positive family history screen who were assessed as not having a serious drug or alcohol problem.

Table 4 shows the specific types of drugs used by clients as reported in the PEI. Figures show the percent of clients using in the past 3 months, 12 months, and lifetime prior to the assessment.

TABLE 4. PERCENT OF CLIENTS WITH VALID PEIs USING SPECIFIC SUBSTANCES

DRUG	3 MONTHS	12 MONTHS	LIFETIME
	%	%	%
Alcohol	81	95	99
Marijuana	65	83	91
LSD	19	31	46
Psychedelics	6	11	16
Cocaine	19	31	47
Amphetamines	19	33	44
Quaaludes	5	8	11
Barbiturates	7	14	22
Tranquilizers	8	15	21
Heroin	1	4	6
Opiates	12	20	28
Inhalants	10	21	43

Main Points:

- The substances used most frequently by this sub-sample were alcohol and marijuana. In the past 3 months 81% reported using alcohol and 65% using marijuana.
- Within the past 3 months, 19% of these clients reported using LSD, 19% using cocaine, and 19% using amphetamines
- Only 1% of these clients reported using heroin within the past 3 months and only 6% reported ever trying it.

SUMMARY

This chapter showed that 55% of the clients in the sample had a record in his or her file of the PEI being administered. Only 26% had a valid PEI (defined by the PEI's two internal validity flags), and could be used in this analysis.

Results showed that the scores of DASA adolescent clients were similar to the national norms of other drug clinic clients indicating similar involvement with drugs, perception of the social benefits of using drugs, and awareness of the effects and consequences of using drugs. Females and minorities had more positive problem screens and scored higher on the summary scales than males and Whites, indicating more of a problem in these areas.

CHAPTER 8: CONCLUSION

This report presented detailed data describing DASA adolescent clients assessed for treatment early in 1990. In Chapter 2, the study looked at client placement into inpatient, intensive outpatient, and regular outpatient treatment modalities. In Chapter 3, adolescents were followed through the three stages of the treatment process: assessment, entry into treatment, and completion of the planned treatment. Chapter 4 compared clients assessed as not having a serious drug or alcohol problem with those assessed as abusing or addicted. Chapter 5 identified characteristics of clients involved with the court system. Chapter 6 examined differences in the characteristics and placement of clients from Eastern and Western Washington. Finally, Chapter 7 aggregated and presented clients' results on the Personal Experience Inventory.

Important findings from these chapters indicate that DASA adolescent clients face a myriad of factors: psychological, social and economic that contribute to, or exacerbate their drug and/or alcohol problem.

Substance Use

- The alcohol and drug use of DASA clients is similar to the drug use of adolescent drug clinic clients nationally (PEI)
- 74% reported using both alcohol and drugs
- 58% of clients were assessed as addicted

Psychological Problems

- 60% of the clients assessed had serious emotional problems. This proportion increased with severity of use
- 40% were at high risk for suicide (PEI)

Social Environment

- 74% of the clients assessed reported poor family functioning
- 65% came from single or no parent households
- 59% reported living with someone else who abuses
- 45% were involved with the courts at the time of assessment
- 33% had run away at least once
- 21% were high school dropouts
- 17% were no longer in the custody of a parent
- 11% were involved with gangs

Economic Conditions

- 48% of the clients assessed were receiving public welfare or social services.
- 23% were identified as being in need but not receiving a particular type of social service or public assistance.

Clearly this group of adolescents may be a hard group to treat. Many have psychiatric problems, poor social support networks, and live in poverty. The presence of multiple problems may require an array of services of which drug and alcohol treatment is an important, but only one, component.

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APPENDICES

APPENDIX A

RESULTS OF CHI-SQUARE ANALYSIS

TABLE 5. CHARACTERISTICS OF CLIENTS BY TREATMENT MODALITY ENTERED

	INPATIENT N=84 19%	OUTPATIENT INTENSIVE N=60 14%	OUTPATIENT REGULAR N=292 67%	ALL N=436 100%	P1	P2	P3
	%	%	%	%			
DEMOGRAPHICS:							
Age > 15	71	72	70	70			
Female	39	44	46	44			
Minority	32	19	16	19			**
Eastern NA	44	15	38	36	***	***	
HS Dropout	36	27	17	22			***
Single or No Parent	74	75	61	65		*	*
Ethnic Group:							
Asian	0	0	1	1			
Black	3	10	6	6			
White	68	81	84	81			***
Native American	19	4	4	6			
Hispanic	5	3	3	3			
Other	5	2	2	3			
SUBSTANCE USE:							
Not Serious	0	1	13	9			
Abuse	5	7	40	28		***	***
Addicted	95	92	47	63			
Alcohol Only	6	5	31	23			
Drugs Only	3	3	4	3		***	***
Alcohol & Drugs	91	92	65	74			
Has Used IV Drugs	12	8	5	7			*
TREATMENT:							
Referral Sources:							
Juv.Authorities	23	17	22	22	**		***
School	23	29	30	29			
Family	19	19	21	20			
Health Professional	9	0	7	6			
Self	7	20	15	14			
Foster/Group	1	10	6	6			
DCFS	4	7	4	3			
Drug/Alc Tx Agency	34	15	6	13			
Other	16	22	17	17			
Prior Admission	57	40	30	36	*		***
Reason Tx Terminated:							
Positive (completed)	62	14	32	35	***	**	***
Negative	17	14	6	9			
Neutral	21	72	62	56			

TABLE 5. CONTINUED

	INPATIENT	INTENSIVE	REGULAR	ALL	P1	P2	P3
	%	%	%	%			
SOCIAL ENVIRONMENT:							
Poor Family Functioning	80	81	71	75			
Lives with Other Drug/Alcohol Abusers	62	62	54	57			
Most Important Person Supports Treatment	79	82	82	81			
Not Under P's Custody	19	27	13	16		**	
Change in Living Arrangement	33	48	28	31		**	
Receiving Public Assistance	71	65	36	47		***	***
Gang Involvement	14	23	9	12		**	
Ran Away at least once	56	39	26	34			***
LEGAL:							
Court Involvement	57	44	41	44			**
OTHER PROBLEMS:							
Physical Hlth	19	22	15	17			
Developmental	21	18	18	19			
Emotional	53	74	63	63	*		

NOTES: This table defines P1, P2 and P3 as follows:

P1: Compares inpatient to intensive outpatient
P2: Compares intensive outpatient to regular outpatient
P3: Compares inpatient to regular outpatient

* - Significant at the 0.05 level
** - Significant at the 0.01 level
*** - Significant at the 0.001 level

No asterisks mean that no significant difference was detected. The N's at the top of the columns on the previous page represent the total size of the group. Percents and significance values for each variable were calculated from a slightly smaller N, since unknowns were omitted.

TABLE 6A. CHARACTERISTICS OF CLIENTS - ASSESSED ONLY v. ASSESSED & ENTERED

	ASSESSED ONLY N=154 26%	ASSESSED & ENTERED TX N=436 74%	ALL ASSESSED N=590 100%	P VALUE
	%	%	%	
DEMOGRAPHICS:				
Age > 15	55	70	66	***
Female	33	44	41	*
Minority	23	19	20	NS
Eastern Washington	22	36	32	**
High School Dropout	18	22	21	NS
Single or No Parent	65	65	65	NS
Age <= 13	11	5	6	***
14-15	34	25	27	
16-17	45	44	44	
18-20	10	26	22	
>=21	0	1	1	
Living Arrangement				
Dual Parent	35	35	35	NS
Single Parent	38	41	40	
Foster/Group	16	12	13	
Other	11	13	12	
Ethnicity:				
Asian	3	1	1	NS
Black	7	6	6	
White	77	81	80	
Hispanic	7	3	4	
Native American	3	6	6	
Other Minority	4	3	3	
SOCIAL ENVIRONMENT:				
Public Assistance	53	47	48	NS
Poor Family Functioning	71	75	74	NS
Lives with Other Drug/Alcohol Abusers	66	57	59	*
Most Important Person Supported Treatment	71	81	78	*
Gang Involvement	7	12	11	NS
Ran Away at Least Once	29	34	33	NS
In Need of Public Assistance/Soc. Services	22	24	23	NS
Not Under Parent's Custody	19	16	17	NS

TABLE 6A. CONTINUED

	ASSESSED ONLY	ASSESSED & ENTERED TX	ALL ASSESSED	P VALUE
	%	%	%	
SUBSTANCE USE:				
Alcohol Only	37	23	27	**
Drugs Only	3	3	3	
Alcohol & Drugs	60	74	70	
Not a Serious Problem	18	8	11	***
Abuse	37	29	31	
Addiction	45	63	58	
TREATMENT VARIABLES:				
Treatment Modality:				
Inpatient	2	19	15	***
Intensive Outpatient	26	14	17	
Regular Outpatient	72	67	68	
Referral Sources:				
Juvenile Authorities	25	22	23	**
School	34	29	30	
Family	19	20	20	
Health Professional	4	6	6	
Self	12	14	13	
Foster/Group Care	7	6	6	
DCFS	5	4	4	
Drug/Alcohol Center	2	13	10	
Other	23	17	19	
Referral Reason:				
Civil/Criminal	46	43	44	*
Family/School	54	51	52	
Transferred	2	10	8	
Suicide Attempt	7	5	6	
Other	46	43	44	
LEGAL:				
Court Involvement	45	45	45	NS
OTHER PROBLEMS:				
Emotional	53	63	60	NS
Developmental	14	19	18	NS
Physical Health	16	17	17	NS

NOTES: For this table and Tables 6B, 7, 9, 10, 11A-D, P value significance is defined as follows:

NS - Not significant at the 0.05 level
* - Significant at 0.05
** - Significant at 0.01
*** - Significant at 0.001

TABLE 6B. CHARACTERISTICS OF CLIENTS ASSESSED AS ADDICTED - ASSESSED ONLY v. ASSESSED AND ENTERED TREATMENT

	ASSESSED ONLY (ADDICTED) N=66 20%	ASSESSED & ENTERED TX (ADDICTED) N=260 80%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	67	73	NS
Female	35	45	NS
Minority	8	19	*
Eastern Washington	33	41	NS
High School Dropout	17	28	NS
Single or No Parent Household	79	65	NS
SUBSTANCE USE:			
Alcohol Only	20	10	*
Drugs Only	0	3	
Alcohol and Drugs	80	87	
Addiction	100	100	--
SOCIAL ENVIRONMENT:			
Public Assistance	64	50	NS
Poor Family Functioning	87	79	NS
Most Important Person Supported Treatment	68	80	NS
Gang Involvement	9	16	NS
TREATMENT VARIABLES:			
Treatment Modality:			
Inpatient	4	30	***
Intensive Outpatient	47	21	
Regular Outpatient	49	49	
Referral Sources:			
Juvenile Authorities	24	18	**
School	33	25	
Family	14	20	
Health Professional	6	9	
Self	15	17	
Foster/Group Care	5	5	
DCFS	2	4	
Drug/Alcohol Center	1	20	
Other	20	1	

TABLE 6B. CONTINUED

	ASSESSED ONLY (ADDICTED)	ASSESSED & ENTERED TX (ADDICTED)	P VALUE
	%	%	
LEGAL:			
Court Involvement	45	47	NS
OTHER PROBLEMS:			
Emotional	75	66	NS
Developmental	18	19	NS
Physical Health	24	18	NS

NOTE: Significance levels same as ined in Table 6A.

TABLE 7A. CHARACTERISTICS OF CLIENTS -- COMPLETED & NOT COMPLETED (ALL MODALITIES)

	COMPLETED N=152 35%	NOT COMPLETED N=284 65%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	73	69	NS
Female	36	49	**
Minority	22	18	NS
Eastern Washington	39	34	NS
High School Dropout	16	25	*
Single or No Parent Household	64	66	NS
SUBSTANCE USE:			
Not a Serious Problem	14	6	***
Abuse	39	22	
Addiction	47	72	
Alcohol Only	32	17	**
Drugs Only	3	4	
Alcohol and Drugs	65	79	
SOCIAL ENVIRONMENT:			
Receiving Public Assistance	46	47	NS
Poor Family Functioning	62	81	***
Gang Involvement	6	16	**
Family Member Participated in Treatment	61	47	**

TABLE 7A. CONTINUED

	COMPLETED N=152 35%	NOT COMPLETED N=284 65%	P VALUE
	%	%	
TREATMENT VARIABLES:			
Treatment Modality:			
Inpatient	34	11	***
Intensive Outpatient	5	18	
Regular Outpatient	61	70	
Referral Reason:			
Civil/Criminal	58	34	***
Transferred	4	14	
School	34	28	
Family	17	23	
Other	35	47	
Referral Sources:			
Juvenile Authorities	32	16	***
School	35	25	
Family	16	23	
Health Professional	4	8	
Self	4	19	
Foster/Group Care	3	7	
DCFS	2	5	
Drug/Alcohol Center	11	14	
Other	16	18	
Good Attendance in Tx Program	94	60	***
LEGAL:			
Court Involvement	54	39	**
OTHER PROBLEMS:			
Physical Health	13	19	NS
Developmental	12	22	*
Emotional	44	72	***

NOTES: Significance levels are same as defined in Table 6A.

TABLE 7B. CHARACTERISTICS OF CLIENTS -- COMPLETED & NOT COMPLETED - (INPATIENT ONLY)

	COMPLETED N=52 61%	NOT COMPLETED N=32 39%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	73	67	NS
Female	36	42	NS
Minority	30	34	NS
Eastern Washington	41	49	NS
High School Dropout	35	37	NS
Single or No Parent Household	53	49	NS
SUBSTANCE USE:			
Not a Serious Problem	0	0	NS
Abuse	4	6	
Addiction	96	94	
Alcohol Only	2	12	NS
Drugs Only	3	2	
Alcohol and Drugs	95	86	
SOCIAL ENVIRONMENT:			
Public Assistance	71	71	NS
Poor Family Functioning	79	83	NS
Gang Involvement	15	13	NS
Family Member Participated in Treatment	67	40	*
TREATMENT VARIABLES:			
Referral Sources:			
Juvenile Authorities	26	19	NS
School	25	16	
Family	18	20	
Health Professional	12	3	
Self	6	9	
Foster/Group Care	1	2	
DCFS	3	4	
Drug/Alcohol Center	31	38	
Other	17	14	
LEGAL:			
Court Involvement	63	48	NS
OTHER PROBLEMS:			
Physical Health	17	22	NS
Developmental	19	24	NS
Emotional	53	53	NS

NOTES: Significance levels are same as defined in Table 6A.

TABLE 7C. CHARACTERISTICS OF CLIENTS -- COMPLETED & NOT COMPLETED (INTENSIVE OUTPATIENT ONLY)

	COMPLETED N=8 14%	NOT COMPLETED N=52 86%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	93	68	NS
Female	46	43	NS
Minority	9	20	NS
Eastern Washington	19	15	NS
High School Dropout	9	29	NS
Single or No Parent Household	24	37	NS
SUBSTANCE USE:			
Not a Serious Problem	8	0	*
Abuse	24	4	
Addiction	67	96	
Alcohol Only	7	5	NS
Drugs Only	0	3	
Alcohol and Drugs	93	92	
SOCIAL ENVIRONMENT:			
Public Assistance	38	69	NS
Poor Family Functioning	81	81	NS
Gang Involvement	8	26	NS
Family Member Participated in Tx	39	35	NS
TREATMENT VARIABLES:			
Referral Sources:			
Juvenile Authorities	31	14	NS
School	44	27	
Family	18	19	
Health Professional	0	0	
Self	10	21	
Foster/Group Care	0	12	
DCFS	0	7	
Drug/Alcohol Center	0	18	
Other	10	25	
Good Attendance in Tx Program	91	57	NS
LEGAL:			
Court Involvement	56	42	NS
OTHER PROBLEMS:			
Physical Health	56	17	*
Developmental	10	19	NS
Emotional	65	75	NS

NOTES: Significance levels are same as defined in Table 6A. Due to small sample size of completed intensive outpatient clients, chi squares T tests were run to verify significance of variables in addition to weighted chi squares.

TABLE 7D. CHARACTERISTICS OF CLIENTS -- COMPLETED & NOT COMPLETED (REGULAR OUTPATIENT ONLY)

	COMPLETED N=92 32%	NOT COMPLETED N=200 68%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	71	69	NS
Female	36	51	*
Minority	18	15	NS
Eastern Washington	39	38	NS
High School Dropout	4	22	***
Single or No Parent Household	41	38	NS
SUBSTANCE USE:			
Not a Serious Problem	22	8	***
Abuse	60	30	
Addiction	18	62	
Alcohol Only	51	22	***
Drugs Only	4	4	
Alcohol and Drugs	45	74	
SOCIAL ENVIRONMENT:			
Public Assistance	33	38	NS
Poor Family Functioning	47	80	***
Gang Involvement	0	13	***
Family Member Participated in Treatment	60	51	NS
TREATMENT VARIABLES:			
Referral Sources:			
Juvenile Authorities	35	16	***
School	39	27	
Family	16	24	
Health Professional	0	10	
Self	2	20	
Foster/Group Care	5	6	
DCFS	2	5	
Drug/Alcohol Center	0	9	
Other	17	17	
Good Attendance in Treatment Program	94	60	***
LEGAL:			
Court Involvement	49	38	NS
OTHER PROBLEMS:			
Physical Health	6	19	**
Developmental	8	22	**
Emotional	36	74	***

NOTES: Significance levels are same as defined in Table 6A.

TABLE 8. CHARACTERISTICS OF CLIENTS BY SEVERITY OF USE (ASSESSED)

	NOT A SERIOUS PROBLEM N=62 4%	ABUSE N=171 31%	ADDICTION N=326 58%	P1	P2	P3
	%	%	%			
DEMOGRAPHICS:						
Age > 15	54	62	72		*	**
Female	41	35	43			
Minority	28	22	17			*
Eastern Washington	25	24	40		***	*
High School Dropout	11		26		**	*
Single/No Parent Hshld	51	14	68			*
		64				
Ethnic Group:						
Asian	6		0	*	***	***
Black	5	3	3			
White	72	12	83			
Hispanic	12	78	4			
Native American	2	2	7			
Other Minority	3	3	3			
		2				
Living Arrangement:						
Single Parent	39	33	43	**		**
Dual Parent	49	36	32			
Foster/Group	0	19	13			
Other	12	12	12			
SUBSTANCE USE:						
Alcohol Only	86	36	12	***	***	***
Drugs Only	2	6	2			
Alcohol and Drugs	12	58	86			
SOCIAL ENVIRONMENT:						
Receives Public Assist.	22	47	50	*		**
In Need of a Public Assistance or Service	33	60	65	**	**	***
Family Member Participated in Tx	58	49	43			*
Ran Away at Least Once	11	28	39	*	*	***
Poor Family Functioning	22	77	80	***		***
Lives with Other Drug/Alcohol Abusers	51	52	64		**	
Change in Living Sitn.	12	25	33			**
Not in Parental Custody	5	20	17	**		*
Gang Involvement	2	7	14		*	*

TABLE 8. CONTINUED

	NOT A SERIOUS PROBLEM	ABUSE	ADDICTION	P1	P2	P3
	%	%	%			
TREATMENT VARIABLES:						
Treatment Modality:						
Inpatient	0	2	25	*	***	***
Intensive Outpatient	12	4	26			
Regular Outpatient	88	94	49			
Completed Treatment	32	34	22		**	
Receiving Special Treatment Services	26	44	41			
Need & Didn't Get Special Services	18	18	27		*	
LEGAL:						
Court Involvement	52	42	46			
OTHER PROBLEMS:						
Physical	14	14	19			
Developmental	6	18	19	*		*
Emotional	36	55	68	*	**	***

NOTES: For this table, P1, P2, and P3 are defined as follows:

P1: Compares Not a Serious Problem to Abuse.
P2: Compares Abuse to Addiction.
P3: Compares Not a Serious Problem to Addiction.

Significance is defined as in Table 5.

TABLE 9. CHARACTERISTICS OF CLIENTS - COURT INVOLVED (ENTERED)

	COURT INVOLVED N=194 44% %	NOT COURT INVOLVED N=242 56% %	P VALUE
DEMOGRAPHICS:			
Age > 15	74	67	NS
Female	36	51	***
Minority	20	19	NS
Eastern Washington	40	33	NS
High School Dropout	31	15	***
Single or No Parent Household	70	61	NS
Ethnic Group:			
Asian	0	2	NS
Black	6	6	
White	80	81	
Native American	8	5	
Hispanic	2	4	
Other Minorities	3	2	
SUBSTANCE USE:			
Not a Serious Problem	9	8	NS
Abuse	26	30	
Addiction	64	62	
Alcohol Only	25	21	NS
Drugs Only	1	5	
Alcohol and Drugs	74	74	
TREATMENT VARIABLES:			
Treatment Modality:			
Inpatient	25	15	**
Intensive Outpatient	13	14	NS
Regular Outpatient	62	71	*
Completed Treatment	42	29	**
SOCIAL ENVIRONMENT:			
Public Assistance	53	42	*
Poor Family Functioning	81	70	*
Lives with Other Drug/Alcohol Abusers	61	54	NS
Not in Parent's Custody	17	15	NS
Gang Involvement	18	8	**
Ran Away at Least Once	45	25	***
Family Member Participated in Tx	47	55	NS

NOTE: Significance levels same as defined in Table 6A.

TABLE 10. CHARACTERISTICS OF CLIENTS BY GEOGRAPHIC RESIDENCE (ASSESSED)

	EASTERN WASHINGTON N=175 32%	WESTERN WASHINGTON N=367 68%	P VALUE
	%	%	
DEMOGRAPHICS:			
Age > 15	70	67	NS
Female	40	42	NS
Minority	13	24	**
High School Dropout	19	22	NS
Single or No Parent Household	61	68	NS
Ethnic Group:			
Asian	0	1	***
Black	0	10	
White	87	76	
Native American	5	5	
Hispanic	7	3	
Other	1	4	
SUBSTANCE USE:			
Not a Serious Problem	8	12	**
Abuse	21	33	
Addiction	71	55	
Alcohol Only	23	26	*
Drugs Only	1	5	
Alcohol and Drugs	76	69	
Has Used IV Drugs	4	8	NS
SOCIAL ENVIRONMENT:			
Poor Family Functioning	78	74	NS
Lives with Other Drug/Alcohol Abusers	61	61	NS
Not Under Parent's Custody	12	20	*
Public Assistance	46	49	NS
Gang Involvement	4	14	***
Ran Away at Least Once	27	36	NS
Family Member Participated in Treatment	34	50	**
LEGAL:			
Court Involved	49	42	NS

TABLE 10. CONTINUED

	EASTERN %	WESTERN %	P VALUE
TREATMENT VARIABLES:			
Treatment Modality:			
Inpatient	20	13	*
Intensive Outpatient	15	20	NS
Regular Outpatient	64	67	NS
Referral Sources:			
Juvenile Authorities	27	22	***
School	27	33	
Family	18	20	
Health Professional	9	4	
Self	18	12	
Foster/Group Care	2	8	
DCFS	4	5	
Drug/Alcohol Centers	14	8	
Other	5	24	
Prior Admission	35	34	NS
Completed Treatment	31	23	NS
Services Received within Catchment Area	79	71	*
Inpatient	50	28	*
Intensive Outpatient	81	94	NS
Regular Outpatient	87	72	**
OTHER PROBLEMS:			
Physical Health	14	17	NS
Developmental	19	18	NS
Emotional	62	61	NS

NOTE: Significance levels same as defined in Table 6A.

TABLE 11A. PEI RESULTS BY GENDER

SUMMARY SCALES:	MALE N=95	FEMALE N=61	TOTAL N=156	P VALUE
	$\bar{x}$	$\bar{x}$	$\bar{x}$	
Personal Involvement with Drugs	49	52	50	NS
Physical Effects of Drug Use	50	53	51	NS
Social Benefits of Use	49	50	49	NS
Personal Consequences of Use	50	52	51	NS
Polydrug Use	48	52	49	*
PROBLEM SCREENS:	%	%	%	
Psychiatric Referral	35	48	40	NS
Sexual Abuse	33	69	47	***
Eating Disorder	--	37	--	--
Physical Abuse	24	51	35	***
Family History of Chemical Dependency	69	63	67	NS
Suicide Potential	36	46	40	NS
OTHER:	%	%	%	
Availability of PEI	25	27	26	NS

	EASTERN WA	WESTERN WA	P VALUE
Availability of PEI	29	25	NS

NOTES: No unknowns included on this table.
Significance (P values) as defined in table 6A.

TABLE 11B. PEI RESULTS BY MINORITY STATUS

	MINORITY N=29	NON-MINORITY N=115	TOTAL N=144	P VALUE
SUMMARY SCALES	$\bar{X}$	$\bar{X}$	$\bar{X}$	T TEST
Personal Involvement with Drugs	54	49	53	*
Physical Effects of Drug Use	55	51	55	*
Social Benefits of Use	52	48	51	NS
Personal Consequences of Use	56	50	55	***
Polydrug Use	52	49	51	NS
PROBLEM SCREENS	%	%	%	
Psychiatric Referral	59	36	40	*
Sexual Abuse	46	47	47	NS
Eating Disorder	27	43	23	NS
Physical Abuse	41	33	35	NS
Family History of Chemical Dependency	82	65	68	NS
Suicide Potential	45	39	40	NS
OTHER	%	%	%	
Availability of PEI	22	28	26	NS

NOTES: No unknowns included on this table
Significance (P values) defined as in table 6A.

TABLE 11C. PEI RESULTS BY TREATMENT MODALITY

	IP N=61	IOP N=30	ROP N=30	All N=156	P1	P2	P3
PROBLEM SCREENS	%	%	%	%			
Psychiatric Referral	51	43	28	40	NS	NS	**
Eating Disorder	33	38	40	37	NS	NS	NS
Sexual Abuse	49	44	46	47	NS	NS	NS
Physical Abuse	42	32	29	35	NS	NS	NS
Family History of Chemical Dependency	75	66	60	67	NS	NS	NS
Suicide Potential	36	40	43	40	NS	NS	NS
OTHER	%	%	%	%	%	%	%
Availability of PEI	26	25	27	26	NS	NS	NS

NOTES: Using a T test:

P1: Compares clients assessed for inpatient treatment with those assessed for regular outpatient (ROP) treatment.
P2: Compares clients assessed for inpatient treatment with those assessed for intensive outpatient (IOP) treatment.
P3: Compares clients assessed for IOP treatment with those assessed for ROP treatment.

NS - Not Significant
* - significant at the .05 level
** - significant at the .01 level
*** - significant at the .001 level

TABLE 11D. PEI RESULTS BY SEVERITY OF USE

	Not A Serious Problem N=10	Abuse N=30	Addict N=110	Total N=150	P1	P2	P3
	%	%	%	%			
Psychiatric Referral							
Inpatient	NA	25	53	51	--	NS	-
Intensive Outpatient	NA	50	44	43	NS	NS	NS
Regular Outpatient	NA	29	32	28	NS	NS	NS
All Modalities	NA	30	45	39	*	NS	**
Sexual Abuse							
Male	17	31	35	33	NS	NS	NS
Female	75	71	65	69	NS	NS	NS
Both Genders	40	50	46	46	NS	NS	NS
Physical Abuse							
Male	17	31	23	25	NS	NS	NS
Female	75	36	55	51	NS	NS	NS
Both Genders	40	33	35	35	NS	NS	NS
Family History of Chemical Dependency							
Inpatient	NA	75	75	75	--	NS	--
Intensive Outpatient	NA	50	75	66	NS	NS	*
Regular Outpatient	50	54	64	60	NS	NS	NS
All Modalities	40	57	72	67	NS	NS	*
Eating Disorder	NA	57	37	39	*	NS	NS
Suicide Potential	10	43	39	38	NS	NS	NS
Program Placement of Clients with a PEI available:							
Inpatient	0	36	26	26	--	NS	--
Intensive Outpatient	29	22	26	25	NS	NS	NS
Regular Outpatient	27	23	31	27	NS	NS	NS
All Modalities	27	24	27	26	NS	NS	NS

NOTES: Using a T test:

P1: Compares clients assessed as not having a serious drug and alcohol problem with those assessed as abusing.

P2: Compares clients assessed as abusing drugs and/or alcohol with those assessed as addicted.

P3: Compares clients assessed as not having a serious drug and alcohol problem with those assessed as addicted.

Significance (P values) are the same as is defined in Table 11C.

MULTIPLE REGRESSION TABLES

TABLE 12A. PREDICTING INPATIENT PROGRAM PLACEMENT

VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Minority*	3.2	1.4	7.5
Public Assistance*	2.4	1.1	5.2
Single or No Parent Household	1.2	0.5	2.7
Western Washington	0.7	0.4	1.6
Addicted*	12.5	2.9	53.3
Agency Referral * Drug/Alcohol Treatment	6.7	2.7	16.6
Health Professional Referral	1.7	0.5	6.2
Female	0.8	0.4	1.8
Age 15 or Less	1.2	0.5	2.9
Prior Treatment	1.2	0.6	2.6
Court Involved*	3.1	1.5	6.5
Emotional Problems*	0.3	0.1	0.6

NOTES: C.I. - Confidence Interval
* - Significant at the $P_{0.05}$ level

MODEL'S CHI SQUARE: 93.4
MODEL'S P VALUE: 0.0001

TABLE 12B. PREDICTING INTENSIVE OUTPATIENT PLACEMENT

PREDICTING INTENSIVE OUTPATIENT OVER INPATIENT			
VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Female	1.0	0.3	2.9
Age 15 or Less	0.8	0.2	2.4
Minority*	0.2	0.1	0.7
Single or No Parent	1.2	0.4	3.9
Western Washington*	2.2	0.7	7.0
Public Assistance	1.1	0.4	3.5
Prior Treatment	0.8	0.3	2.1
Emotional Problems*	3.0	1.1	8.5
D/A Tx Agency Referral*	0.3	0.1	0.9
Court Involved*	0.4	0.1	1.0
Assessed as Addicted	0.6	0.1	4.7
Not in Parent's Custody	0.9	0.3	3.0
Gang Involvement	3.5	0.9	13.3
Uses Alcohol Only	1.6	0.2	17.0
PREDICTING INTENSIVE OUTPATIENT OVER REGULAR OUTPATIENT			
Female	0.5	0.2	1.3
Age 15 or Less	1.7	0.6	4.6
Minority	0.6	0.1	2.4
Single or No Parent	1.4	0.5	3.9
Western Washington *	6.2	2.2	17.4
Public Asisstance*	3.5	1.4	8.7
Prior Treatment	0.7	0.3	1.8
Emotional Problems	1.0	0.4	2.5
D/A Tx Agency Referral*	6.5	1.5	28.5
Court Involved	1.4	0.6	3.4
Addicted*	15.7	4.0	62.1
Not in Parent's Custody	1.6	0.6	4.6
Gang Involvement	1.3	0.4	4.6
Uses Alcohol Only	0.3	0.1	1.5

NOTES: * - Significant at the $P_{0.05}$ level

	V. INPATIENT	V. REGULAR OUTPATIENT
MODEL'S CHI SQUARE:	31.9	75.5
MODEL'S P VALUE:	0.0041	0.0001

TABLE 12C. PREDICTING REGULAR OUTPATIENT TREATMENT

VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Female	1.8	0.9	3.9
Age 15 or Less	0.6	0.3	1.4
Minority*	0.3	0.1	0.9
Single or No Parent	0.9	0.4	1.9
Western Washington*	0.4	0.2	0.9
Public Assistance*	0.2	0.1	0.5
Addicted*	0.05	0.01	0.1
High School Dropout	0.6	0.3	1.4
I.V. Drug Use	3.1	0.9	11.5
Referred By School	0.7	0.3	1.6
Prior Treatment	0.8	0.4	1.8
Ran Away At Least Once*	0.4	0.2	0.9
Court Involved	0.6	0.3	1.3
Not In Parent's Custody	1.0	0.4	2.4
Gang Involvement	1.5	0.5	4.4

NOTES: CI - Confidence Interval
* - Significant at the $P_{\leq .05}$ level

MODEL'S CHI SQUARE: 107.8
MODEL'S P VALUE: 0.0001

TABLE 13. PREDICTING ENTERING TREATMENT (ADDICTED ONLY)

VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Age 15 or Less	0.4	0.2	1.1
Female*	4.6	1.5	13.7
Minority*	6.5	1.3	31.4
Public Assistance*	0.2	0.1	0.6
Single or No Parent Household	0.7	0.2	1.9
Western Washington	0.7	0.3	1.8
D/A Tx Agency Referral*	12.5	0.9	169.9
Most Imp. Person Not Support Tx	0.4	0.1	1.2
Uses Alcohol Only	0.4	1.0	1.4
Court Involved	1.4	0.6	3.5
Emotional Problems	0.5	0.2	1.5

NOTES: C.I. - Confidence Interval
* - Signficant at the $P_{.05}$ level

The discussion in the report focuses on NOT entering treatment. This required flipping of the dependent variable and taking the inverse of the odds ratios or flipping the dichotomous independent variable.

MODEL'S CHI SQUARE: 42.2
MODEL'S P VALUE: 0.0001

TABLE 14. PREDICTING COMPLETION OF TREATMENT PLAN AMONG (REGULAR OUTPATIENT CLIENTS)

VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Female	0.5	0.2	1.7
Age 15 or Less	0.4	0.1	1.3
Minority	2.3	0.6	9.5
Public Assistance	1.4	0.5	4.5
Single or No Parent Household	0.9	0.3	2.6
Western Washington	0.7	0.2	2.1
Addicted*	0.3	0.1	0.7
Emotional Problems*	0.3	0.1	0.7
Developmental Problems*	0.3	0.1	1.4
Not referred into Treatment by School*	1.1	0.2	14.9
Self-referred into Treatment*	0.1	0.0	0.8
No Family Member Participated in Treatment	3.6	1.0	12.4
Court Involved	0.6	0.2	2.2
High School Dropout	1.1	0.2	6.4
Poor Family Functioning*	0.2	0.1	0.7

NOTES: * = Significant at the $P_{\leq .05}$ level
C.I. = Confidence Interval

Inverses were used to get Non-Completion figures as discussed in the report.

MODEL'S CHI SQUARE: 55.92
MODEL'S P VALUE: 0.0001

TABLE 15. PREDICTING ADDICTION

VARIABLE	ADJUSTED ODDS RATIO	C.I. LOWER LIMIT	C.I. UPPER LIMIT
Age 15 or Less	1.1	0.4	1.5
Female	1.8	0.7	4.4
Minority	0.7	0.2	1.9
Public Assistance	1.3	0.5	3.3
Single or No Parent Household	0.9	0.3	2.5
Western Washington	0.5	0.2	1.2
Poor Family Functioning	1.4	0.5	3.7
Emotional Problems*	3.7	1.4	9.7
Developmental Problems	1.0	0.4	2.5
High School Dropout*	3.1	1.1	8.2
Court Involved	1.4	0.6	3.3
Uses Alcohol Only*	0.3	0.1	1.0
Ran Away At Least Once	1.8	0.7	4.3
In Need of Public Assistance/Soc. Services	0.5	0.2	1.2

NOTES: C.I. - Confidence Interval
* - Signficant at the $P_{<.05}$ level

MODEL'S CHI SQUARE: 32.2
MODEL'S P VALUE: 0.0037

APPENDIX B

ODDS-RATIO DOCUMENTATION

All multiple regressions in this report were run using an adjusted odds-ratio technique. An odds-ratio is related but not the same as a relative risk ratio. The adjusted odds-ratio is used because it can be calculated independent of the values of the covariates (or independent variables). An example of both concepts is presented below.

Calculating the Odds-Ratio

The formula for calculating the odds of an event is as follows:

$$\frac{P}{1-P}$$

Where P is the probability of the event.

For example, assuming there are only two modalities (inpatient and outpatient) and, suppose the probability of a White being placed in inpatient treatment is .25 (25% or 1/4). Then the probability of a White being placed in outpatient is .75 (75% or 3/4).

Plugging these probabilities in the formula we get:

$$\frac{1/4}{3/4} = 1/4 \times 4/3 = 4/12 = 1/3 \quad \text{or } 1{:}3$$

So the odds of a White person being placed in inpatient treatment is 1:3.

Now, suppose the probability of a minority group member being placed in inpatient treatment is .50 (50% or 1/2). Then the probability of being in outpatient treatment for minorities is .50 (50% or 1/2).

Plugging these probabilites into the formula we get:

$$\frac{1/2}{1/2} = 1/2 \times 2/1 = 2/2 = 1 \quad \text{or } 1{:}1$$

Once we have both the odds for Whites being placed in inpatient treatment and the odds for minorities being placed in inpatient treatment we can calculate the odds-ratio.

The odds-ratio formula for this example would be:

$$\frac{\text{Odds for minority to enter IP}}{\text{Odds for Whites to enter IP}}$$

So, the odds ratio is $\frac{1/1}{1/3} = 1/1 \times 3/1 = 3/1$ or 3:1

Odds-Ratio = 3:1

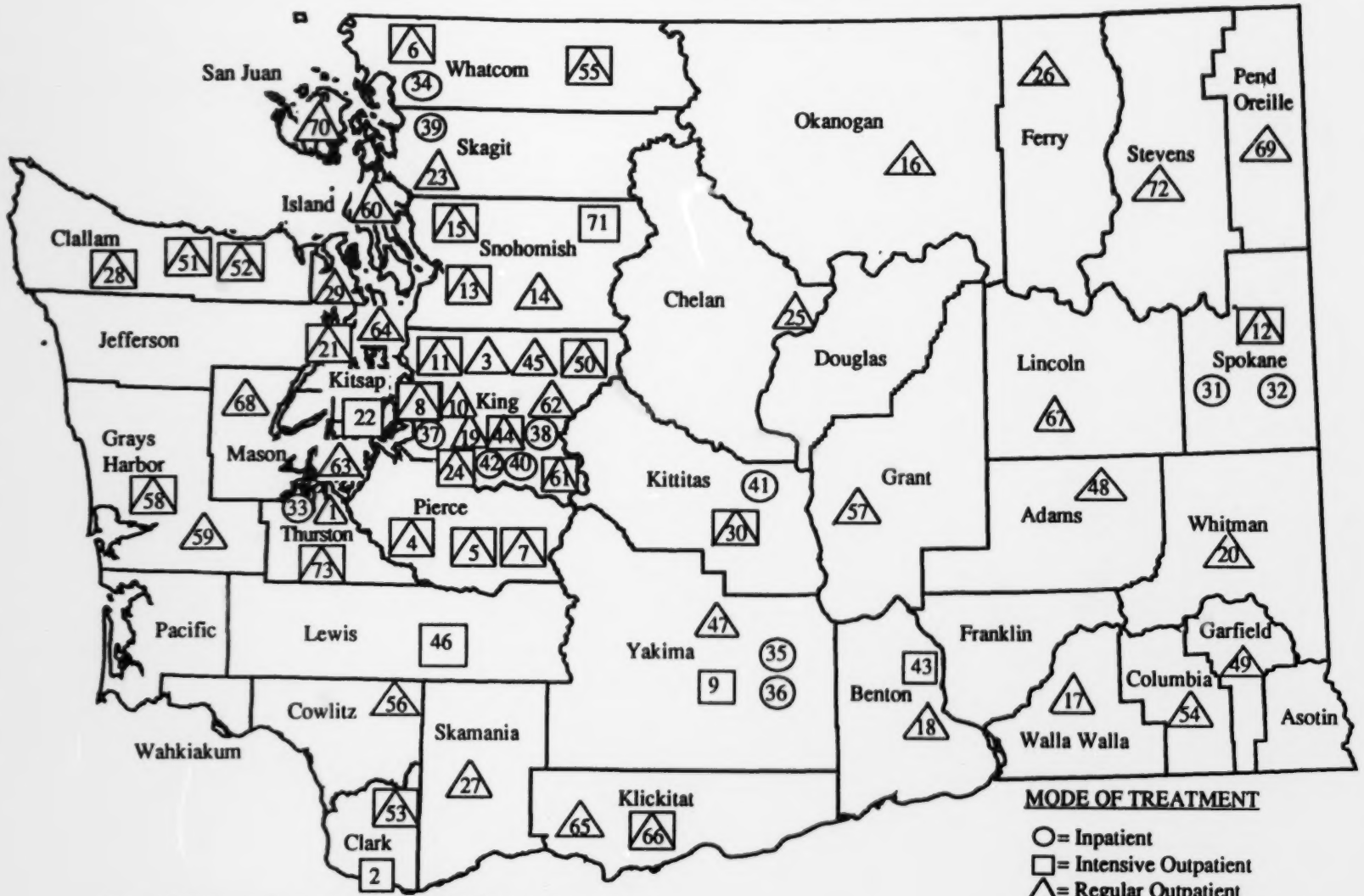
Calculating Relative Risk Ratio:

The Relative Risk ratio is the ratio of the probabilities. As discussed above: the proportion of Whites being placed in inpatient is 25%, while the proportion of minorities being placed in inpatient in 50%

So, $\frac{50\%}{25\%}$ Or $\frac{1/2}{1/4} = 2$

So the probability of a minority being placed in inpatient treatment relative to Whites is 2:1

DIVISION OF ALCOHOL/SUBSTANCE ABUSE ADOLESCENT TREATMENT PROGRAMS STATEWIDE



Note: ORDA agency number is printed inside each symbol.
A list of agencies, by number, follows.

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WASHINGTON STATE AGENCIES SERVING DASA ADOLESCENT CLIENTS

ADOLESCENT AGENCIES IN THE SAMPLE

FAC#	FACILITY	LOCATION	ZIP	MODE	SIZE
01	Thurston/Mason Community Mental Health (T/M CMHC)	Olympia	98501	ROP	L
02	Recovery NW Outpatient Center	Vancouver	98660	IOP	L
03	Youth Eastside Services (YES)	Bellevue	98008	ROP	L
04	Alpha House/Force	Tacoma	98404	R/I	L
05	405 Program	Tacoma	98406	R/I	L
06	Community Alcohol and Drug Center (CADC)	Bellingham	98226	R/I	L
07	Pierce County Alliance	Tacoma	98402	R/I	L
08	Highline Youth and Family Services	Seattle	98166	R/I	L
09	NW Counseling (Omni Clinic)	Yakima	98902	IOP	L
10	Center for Human Services (CHS)	Seattle	98133	ROP	L
11	Central Youth and Family Services (CYFS)	Seattle	98144	R/I	L
12	Daybreak OP of Spokane	Spokane	99203	R/I	L
13	Community Alcohol and Drug Services (CAS)	Everett	98201	R/I	L
14	Community Alcohol and Drug Services (CAS)	Lynnwood	98046	ROP	L
16	Okanogan Cty. Counseling Services Alc/Drug Prog	Omak	98841	ROP	M
17	Walla Walla Community Alc & Drug Abuse Center	Walla Walla	99362	ROP	M
18	Carondelet Psychiatric Care Center	Richland	99352	ROP	M
19	Auburn Youth Resources	Auburn	98002	ROP	M
20	Whitman County Alcohol Center	Pullman	99163	ROP	M
21	Kitsap County (KCCA)	Bremerton	98321	R/I	M
22	Kitsap Mental Health Services	Bremerton	98312	IOP	M
23	Skagit County Council on Alcoholism	Mt. Vernon	98273	ROP	M
24	Kent Valley Youth Service Bureau	Kent	98032	R/I	M
25	Center for Alcohol and Drug OP Services	Wenatchee	98807	ROP	M
26	Ferry County Community Services	Republic	98166	ROP	S
28	West End Outreach Services	Forks	98331	R/I	S
29	Jefferson Cty Community Alc/Drug Abuse Center	Port Townsend	98638	ROP	S
30	Alcohol and Drug Dependency Services (ADDS)	Ellensberg	98926	R/I	S
31	Daybreak IP of Spokane	Spokane	99203	IP	NA
32	Deaconess Hospital Chemical Dependency Unit	Spokane	99210	IP	NA
33	St. Peters Chemical Dependency Center	Lacey	98503	IP	NA
34	Olympic Center	Bellingham	98226	IP	NA
35	Green Valley Lodge	Sunnyside	98944	IP	NA
36	Sundown M Ranch	Selah	98942	IP	NA
37	Ryther Child Center	Seattle	98115	IP	NA
38	Thunderbird Treatment Center	Seattle	98118	IP	NA
39	United General Hospital	Sedro Woolley	98204	IP	NA
40	NW Treatment Center	Seattle	98117	IP	NA
41	Parke Creek	Ellensberg	98926	IP	NA
42	Ryther Child Center "Discovery House"	Seattle	98155	IP	NA
43	Discovery Substance Abuse Services	Kennewick	99336	IOP	L
44	Federal Way Youth Services	Federal Way	98063	R/I	L
46	Recovery NW Chehalis	Chehalis	98532	IOP	L

ADOLESCENT AGENCIES NOT IN THE SAMPLE

FAC #	FACILITY	LOCATION	ZIP	MODE	SIZE
15	Community Alcohol and Drug Services (CAS)	Arlington	98223	R/I	L
27	Skamania County Counseling Center	Stevenson	98648	ROP	S
45	United Indians of All Tribes Foundation (INASIL)	Seattle	98102	ROP	L
47	AJ Alcohol and Drug Services	Yakima	98901	ROP	M
48	Adams Co. Comm. Counseling Services	Othello	99344	ROP	S
49	The Rogers Counseling Center	Clarkston	99403	ROP	S
50	Comprehensive Alcohol Services	Kent	98032	R/I	S
51	North Olympic Alcohol & Drug Center	Pt. Angeles	98362	R/I	S
52	Peninsula Counseling Center Inc	Pt. Angeles	98362	ROP	S
53	Clark County Council on Alcoholism	Vancouver	98668	R/I	S
54	Columbia Count Services	Dayton	99328	ROP	S
55	Community Alcohol and Drug Clinic	Bellingham	98226	R/I	M
56	Drug Abuse Prevention Center	Kelso	98626	ROP	S
57	Grant Co. Alcohol & Drug Center	Moses Lake	98837	R/I	S
58	Kairos Center	Aberdeen	98520	R/I	M
59	Kairos Detox & Recov. Hse Branch Facility	Hoquiam	98550	ROP	S
60	Recovery Northwest	Oak Harbor	98277	R/I	M
61	Intercept Associates	Federal Way	98003	R/I	S
62	Renton Area Youth Services	Renton	98055	ROP	M
63	Intercept Associates	Bainbridge	98110	R/I	M
64	Awareness Express	Ft Orchard	98366	R/I	S
65	Counseling & Resource Center	Goldendale	98620	ROP	S
66	Conseling & Resource Center Branch	White Salmon	98672	R/I	S
67	Lincoln County Alcohol and Drug Center	Davenport	99122	ROP	S
68	Listening Post	Shelton	98584	ROP	S
69	Community Alcohol Center	Newport	99156	ROP	S
70	San Juan Community Alcohol & Drug Center	Friday Harbor	98250	ROP	S
71	Catholic Services	Everett	98201	IOP	S
72	Stevens County Counseling	Colville	99114	ROP	M
73	TAMARC	Olympia	98507	R/I	S

NOTES: ROP = Regular Outpatient; IOP = Intensive Outpatient
R/I = Regular and Intensive Outpatient; IP = Inpatient

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SAMPLE & POPULATION FIGURES
ADOLESCENT CLIENT DESCRIPTIVE SURVEY

TABLE 16A - AGENCIES PROVIDING TREATMENT SERVICES TO DASA FUNDED ADOLESCENT CLIENTS

	INPATIENT	INTENSIVE OUTPATIENT ONLY				REGULAR OUTPATIENT ONLY				INTENSIVE & REGULAR OUTPATIENT				TOTAL
		L	M	S	ALL	L	M	S	ALL	L	M	S	ALL	
POPULATION	12	1	1	4	6	6	6	22	34	8	2	11	21	73
SAMPLE	12	1	1	3	5	6	2	5	13	8	0	5	13	43
SAMPLING FRAME	100%	100%	100%	75%	83%	100%	33%	23%	38%	100%	0%	45%	62%	59%

NOTES: L - LARGE (>20 in population)
M - MEDIUM (9-20 in population)
S - SMALL (< 9 in population)

TABLE 16B - WEIGHTED SAMPLE - ADOLESCENTS RECEIVING DASA FUNDED SERVICES IN WINDOW PERIOD

	INPATIENT	INTENSIVE OUTPATIENT				REGULAR OUTPATIENT				TOTAL
		L	M	S	ALL	L	M	S	ALL	
EST. POPULATION	234	150	52	70	272	763	178	147	1088	1594
WTD. SAMPLE	87	55	19	26	100	283	66	54	403	590
WTD. SAMPLING FRAME	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%

NOTES: EST. - Estimated
WTD. - Weighted

TABLE 17. VARIABLE DOCUMENTATION

DEMOGRAPHIC VARIABLES	EXPLANATION	PAGE	QUESTION
Age	calculated from birthdate	3	6
Sex		3	130
Ethnic Group	minority status = 1, 2, 4, 5, or 6	26	131
Residence	Eastern or Western Washington determined from zip code	2	client address
Dropout	Q = 8	6	18
Living Situation	recalculated from Q15. Single P = 2 & not 3, 3 & not 2, hand-checked 4 Dual P = 1, 2&3, 2&4, 3&4 Foster = 6 Group = 12 Alone = 11 Other = all else Single/No P = Single, Foster/Group, Alone & Other	4	15
SUBSTANCE USE VARIABLES			
Severity Level	NSP = 0 abuse = 1 addiction = 2	7	24a
Substance Used	alcohol only = 1 drug only = 2 alcohol and drugs = 3	7	24
Ever Used IV Drugs	no = 0 yes = 1, 2, 3	13	44
SOCIAL ENVIRONMENT VARIABLES			
Poor Family Functioning	poor = 1 and 2	18	61
Lives with Other Drug/Alcohol Abusers	no = 0 yes = 1	5	16
Most Important Person Supports TX	= 3, 4, or 5	14	49
Family Member Participated in Tx	yes = 1	24	76
Not in Parents Custody	Q17 = 1 (yes) or Q17 = 1 (yes)	5	17 & 17c
Change in Living Situation During Tx	If Q46, Q46a, Q46b = 0 (No)	13	46, 46a, & 46b
Gang Involvement	yes = 1	13	47
Ran away at Least Once	0 = 6	14	47

NOTE: PEI and Client Descriptive Survey instruments are stored by DSES/ORDA.

TABLE 17. CONTINUED

TREATMENT VARIABLES	EXPLANATION	PAGE	QUESTION
Referral Sources	Up to 2 sources recorded: self = 1 family = 2, 3, 4 school = 6 juvenile authorities = 15 health professional = 7, 8, 10, 11 drug/alcohol tx center = 12,13 foster or group = 22 DCFS = 16, 17, 18 other = all else	3	8
Referral Reason	civil/criminal incident = 2,3,4,5,6 family/friend/= 10 school pressure = 11 suicide attempt = 13 transferred = 21 other = all else	4	9
Prior Admission	Q22 > 0 or Q23 > 0	7	22 & 23
Good Attendance in Tx Program	over half or almost all the time	25	77
Entered Treatment	Date entered filled in and reason completed not other filled in as assessment only.	7	26 27
Completed Tx	Date entered and date completed both available, and in correct order. Reason terminated= 1 completed tx	7 8 8	26 27 28
OTHER PROBLEMS			
Physical Health	yes = 1	16	52
Developmental	yes = 1	16	55
Emotional	yes = 1	17	58
LEGAL			
Court Involvement	Referral Source = 15 (juvenile auth) or Court Diverted = 1 (yes) or Juvenile Justice System Involvement = 1 (yes)	4 6 6	15, 15a 8b 20
PUBLIC SERVICES			
Family or Individual Receiving Public Services/Asst. (Welfare, Medical Assistance, Family Services, etc.)	yes = 1	19	64
In Need but not Receiving Public Assistance or Social Services	If needed services (=1) but weren't arranged for (=2)	21	70 71a-h

NOTE: PEI and Client Descriptive Survey instruments are stored by DSHS/ORDA.

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GEOGRAPHIC RESIDENCE DOCUMENTATION

Clients and agencies were assigned to counties by their zip code. Counties were then categorized by those east and west of the mountains.

EASTERN WASHINGTON COUNTIES:

Adams
Aostin
Benton
Chelan
Columbia
Douglas
Ferry
Franklin
Garfield
Grant
Kittitas
Klickitat
Lincoln
Okanogan
Pend Oreille
Spokane
Stevens
Walla Walla
Whitman
Yakima

WESTERN WASHINGTON COUNTIES:

Clallam
Cowlitz
Grays Harbor
Island
Jefferson
King
Kitsap
Lewis
Mason
Pacific
Pierce
San Juan
Skagit
Skamania
Snohomish
Thurston
Wahkiakum
Whatcom

ZIP CODE CATCHMENT AREAS
USED TO MEASURE PROXIMITY BETWEEN RESIDENCE AND TREATMENT PROGRAM ATTENDED

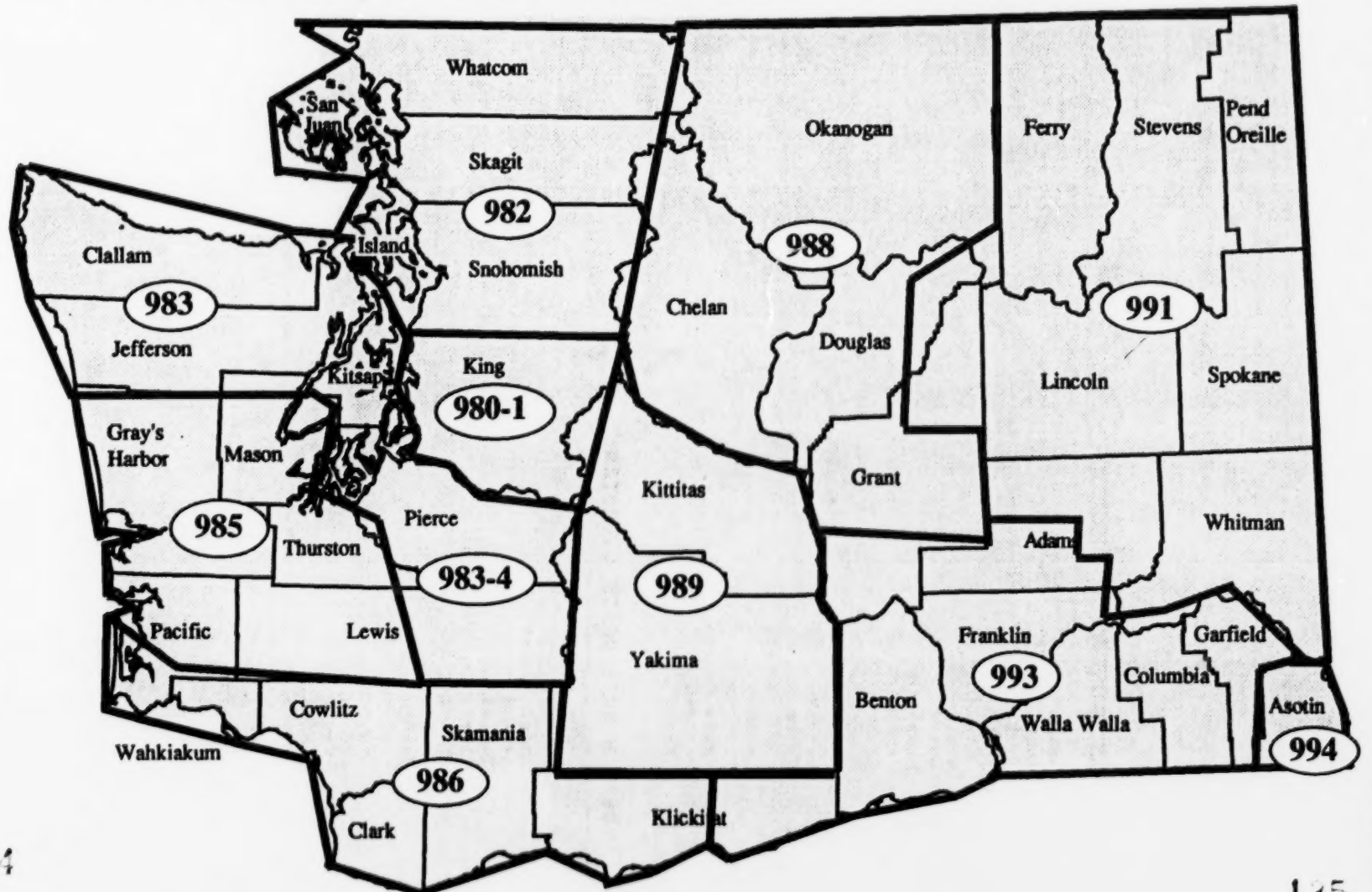

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TABLE 18. NUMBER OF CLIENTS IN THE SAMPLE - BY COUNTY

This table presents data on the number of clients from each county at each stage & of treatment.

	ASSESSED	ENTERED	COMPLETED
Adams	1	1	0
Asotin	1	0	0
Benton	40	40	3
Chelan	17	17	14
Clallam	7	3	2
Clark	8	6	2
Cowlitz	1	1	0
Douglas	14	12	10
Ferry	2	2	0
Franklin	5	5	1
Grant	1	1	1
Grays Harbor	1	1	0
Island	1	1	1
Jefferson	23	10	4
King	163	128	49
Kitsap	13	9	3
Kittitas	9	8	7
Klickitat	5	2	1
Lewis	17	9	0
Mason	1	1	0
Okanogan	6	6	2
Pierce	73	46	12
Skagit	16	8	0
Snohomish	15	11	6
Spokane	19	17	3
Stevens	1	1	0
Thurston	16	16	4
Walla Walla	13	10	2
Whatcom	11	8	3
Whitman	8	4	0
Yakima	35	18	10
TOTAL	542	400	140

NOTE: County information was not available for 40 clients who were assessed, 36 who entered, and 12 who completed. Counties not included in the above table had no clients in the sample.

DOCUMENTATION OF WEIGHT ASSIGNMENT — APPENDIX F

A complicated mathematical procedure was used to determine the weights for this analysis. Weights were calculated based on agency size and modality and were assigned to the clients' record. Clients from an agency who participated in the same modality of treatment would have identical weights attached to their data record. These weights were then used to adjust client responses in all statistical manipulations of the data in order to achieve a more representative sample/distribution.

The first step was to calculate agency sampling fractions based on modality and size. Then client sampling fractions, specific to each agency, were determined based on modality, agency size, and the precise number of clients. The next step was to calculate the time adjustment factor. Then all of these fractions were multiplied together to obtain the overall sampling fraction. Final weights were determined by taking the inverse of the overall sampling fraction.

$$\text{WEIGHT} = \frac{1}{\text{ASF} \bullet \text{CSF} \bullet \text{TAF}}$$

Agency Sampling Fraction (ASF):

$$\text{ASF} = \frac{\text{Number of Agencies in the Sample}}{\text{Number of Agencies in the Population}}$$

Since not all DASA adolescent outpatient treatment agencies were sampled in this study, unique fractions were determined for outpatient agencies based on the size of the agency (i.e. large, medium, or small) and the type of services offered (i.e. intensive or regular). A large agency was defined as one that assessed more than 20 DASA clients between January 1 and March 31, 1990. A medium sized agency referred to those that assessed between 9 and 20 clients, and a small agency as one that assessed fewer than 9 clients.

Since all of the inpatient facilities serving adolescents in the state were included in the sample, the agency sampling fraction for all inpatient agencies was 1.

Client Sampling Fraction (CSF):

$$\text{CSF} = \frac{\text{Number of Clients in the Sample}}{\text{Number of Clients in the Population}}$$

Again, unique client sampling fractions were calculated for outpatient agencies based on the size of the agency, the type of services offered, and the precise number of clients in each agency. As with the agency sampling fraction, the client sampling fraction for inpatient facilities was 1 since the whole population of clients receiving inpatient services during January and May 1990 was sampled.

Time Adjustment Fraction (TAF):

$$\text{TAF} = \frac{\text{Number of months in window for outpatient}}{\text{Number of months in window for inpatient}} = 3/5 = 0.6$$

An adjustment for time was necessary since the defining criteria for selecting outpatient clients is different from the criteria for selecting inpatient clients. Outpatient clients assessed between January and March were included, where as inpatient clients assessed between January and May were included. The time period for inpatient clients was extended in order to increase the number of these clients in the sample. As a result all outpatient modalities were to be multiplied by 0.6, and all inpatient clients by 1.

All of the above fractions (agency sampling, client sampling and time) were multiplied together for each agency's treatment modality. The inverses of these fractions became the weights necessary to adjust clients responses in order to make the proportions in our sample more representative of the true population of DASA adolescent clients.

TABLE 19. WEIGHTS USED

Agency Type & Number	Agency Sampling Fraction	Client Sampling Fraction	Time Fraction	Overall Fraction	Inverse/Final Weight
REGULAR OUTPATIENT TREATMENT - LARGE:					
#1	1	.48	.6	.2857	3.5
#3	1	.41	.6	.2488	4.02
#4	1	.21	.6	.1269	7.88
#5	1	.7	.6	.42	2.38
#7	1	.64	.6	.3818	2.62
#8	1	.33	.6	.2	5.00
#10	1	.32	.6	.1935	5.17
#11	1	.52	.6	.3103	3.22
#12	1	.30	.6	.1814	5.51
#17	1	.73	.6	.4364	2.29
#19	1	.57	.6	.3429	2.92
#24	1	.35	.6	.2093	4.78
#25	1	.33	.6	.2	5.0
#44	1	.93	.6	.5571	1.79
REGULAR OUTPATIENT TREATMENT - MEDIUM:					
#18	.187	1	.6	.1122	8.91
#29	.187	1	.6	.1122	8.91
REGULAR OUTPATIENT TREATMENT - SMALL:					
#6	.318	1	.6	.1908	5.24
#13	.318	.50	.6	.0954	10.48
#14	.318	1	.6	.1908	5.24
#16	.318	1	.6	.1908	5.24
#20	.318	1	.6	.1908	5.24
#21	.318	1	.6	.1908	5.24
#23	.318	1	.6	.1908	5.24
#26	.318	1	.6	.1908	5.24
#28	.318	1	.6	.1908	5.24
#30	.318	1	.6	.1908	5.24

TABLE 19. CONTINUED

Agency Type & Number	Agency Sampling Fraction	Client Sampling Fraction	Time Fraction	Overall Fraction	Inverse/Final Weight
INTENSIVE OUTPATIENT TREATMENT - LARGE:					
#4	1	1	.6	.6	1.67
#5	1	1	.6	.6	1.67
#7	1	.7333	.6	.44	2.27
#8	1	1	.6	.6	1.67
#9	1	.5	.6	.3	3.33
#11	1	1	.6	.6	1.67
#12	1	1	.6	.6	1.67
#24	1	1	.6	.6	1.67
#44	1	.9091	.6	.5455	1.83
INTENSIVE OUTPATIENT TREATMENT - MEDIUM:					
#46	.581	.8889	.6	.3099	3.23
INTENSIVE OUTPATIENT TREATMENT - SMALL:					
#2	.786	1	.6	.4716	2.12
#6	.786	1	.6	.4716	2.12
#13	.786	1	.6	.4716	2.12
#21	.786	1	.6	.1908	2.12
#22	.786	1	.6	.1908	2.12
#28	.786	1	.6	.1908	2.12
#30	.786	1	.6	.1908	2.12
#43	.786	1	.6	.1908	2.12
INPATIENT:					
#31	1	.98	1	.98	1
#32	1	1	1	1	1
#33	1	1	1	1	1
#34	1	1	1	1	1
#35	1	1	1	1	1
#36	1	1	1	1	1
#37	1	1	1	1	1
#38	1	1	1	1	1
#39	1	1	1	1	1
#40	1	1	1	1	1
#41	1	1	1	1	1
#42	1	1	1	1	1